

American Artisan

Founded 1880

The Warm Air Heating
and Sheet Metal Journal

Vol. 98, No. 18

CHICAGO, NOVEMBER 2, 1929

\$2.00 Per Year

WATCHING THE MARKET —for more business—for you

The editors of American Artisan are
now preparing for publication—

AMERICAN ARTISAN

36th WARM AIR FURNACE ANNUAL

Articles covering the following subjects will be included
in this big annual number:

A Review of the Past Year—Newest Developments in
Unit Design and Installation—Trend of Public Favor—
Field Survey Giving Dealer Opinions and Experiences
—Coal, Gas, Oil and Forced Air Heating—Forecast of
Business for 1930—Special Articles on Merchandising
and Installation—Research Developments.

SHEET METAL CONTRACTING

New Markets—New Metals—New Products—Merchan-
dising Sheet Metal Work—Unusual Installations—Spe-
cial Articles Dealing With Mechanical and Metallurgical
Problems—Market Outlook—Business Forecast.

A special annual issue that will help you know
your market—that will help you sell to it in 1930

WATCH FOR FURTHER ANNOUNCEMENTS

Manufacturers and Jobbers—RESERVE YOUR ADVERTISING SPACE NOW



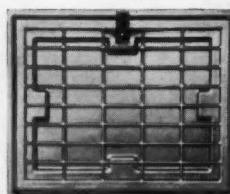
• • • • How much selling
can you do with the register
you handle? • • • •

A FURNACE has this talking point, and that... efficiency, economy, cleanliness. And your installation will be so and so . . . Much better than the usual job—if you can make the customer believe it.

And what of the registers? Can you claim some superiority for the particular type that you will install...or will they be just "registers"?

Registers are as important as any other part of your furnace job...And good registers offer their full share of effective selling arguments.

When you stop to think of it, registers are the very bottle's neck of a heating plant. The furnace and piping cannot be efficient if the registers offer resistance to the passage of the rising warm air. Nor can a good furnace continue to give clean heat if the floor registers trap dust and let it fall into the warm air ducts. You won't have to gloss over these facts if you use LAMNECK Improved registers on every job. LAMNECKS will not "bottle up" heat in the ducts...they will not form dust traps in the floor. They are more efficient, cleaner, better looking and they make your job easier to sell. In spite of their greater value they don't cost you a cent more.



LAMNECK IMPROVED REGISTERS

If you are not already convinced that LAMNECKS are the cleanest, most efficient and best looking registers on the market, we want to send you a sample floor register. It will prove conclusively the superiority of LAMNECK registers. Use this coupon.

THE W. E. LAMNECK COMPANY
416-436 Dublin Ave., Columbus, Ohio

Gentlemen: I would like to see for myself why Lamneck registers are cleaner and more efficient. Please send me, without obligation, a sample floor register.

Name _____

Address _____

City _____ State _____

MIDLAND'S "CLEANER HEAT SERIES" and WHAT IT MEANS TO YOU

MORE SALES. "Cleaner Heat" breaks down sales resistance and makes selling easier. The Midland line, consisting of TRUESTEEL, EL CAPITAN and BENJAMIN FRANKLIN, gives a dealer unlimited scope and an opportunity to figure on every job. Midland's knowledge of the dealer's problem and cooperative methods make selling more certain. That is why the Midland Line means more sales to you.



AMERICA'S MOST
BEAUTIFUL STEEL FURNACE

A BETTER YEARLY PROFIT. In many cases a furnace installer will close the year and find that he has made little or no profit. As a Midland dealer selling the "Cleaner Heat" series you must make a profit and a good one for the Midland organization has a solution to the dealer's problem and has methods of cooperative merchandising which insure a profit on your sales. You cannot sell a line more complete, a line which sells easier, builds more customer satisfaction and gives you a yearly profit than the Midland "Cleaner Heat" series. Write and let us tell you all about the Midland franchise.

**THE MIDLAND FURNACE CO.
COLUMBUS, OHIO**



TRUESTEEL
AMERICA'S
FINEST
STEEL FURNACE



AMERICA'S
LOWEST
PRICED
QUALITY
STEEL
FURNACE
**BENJAMIN
FRANKLIN**
PRODUCT
MIDLAND

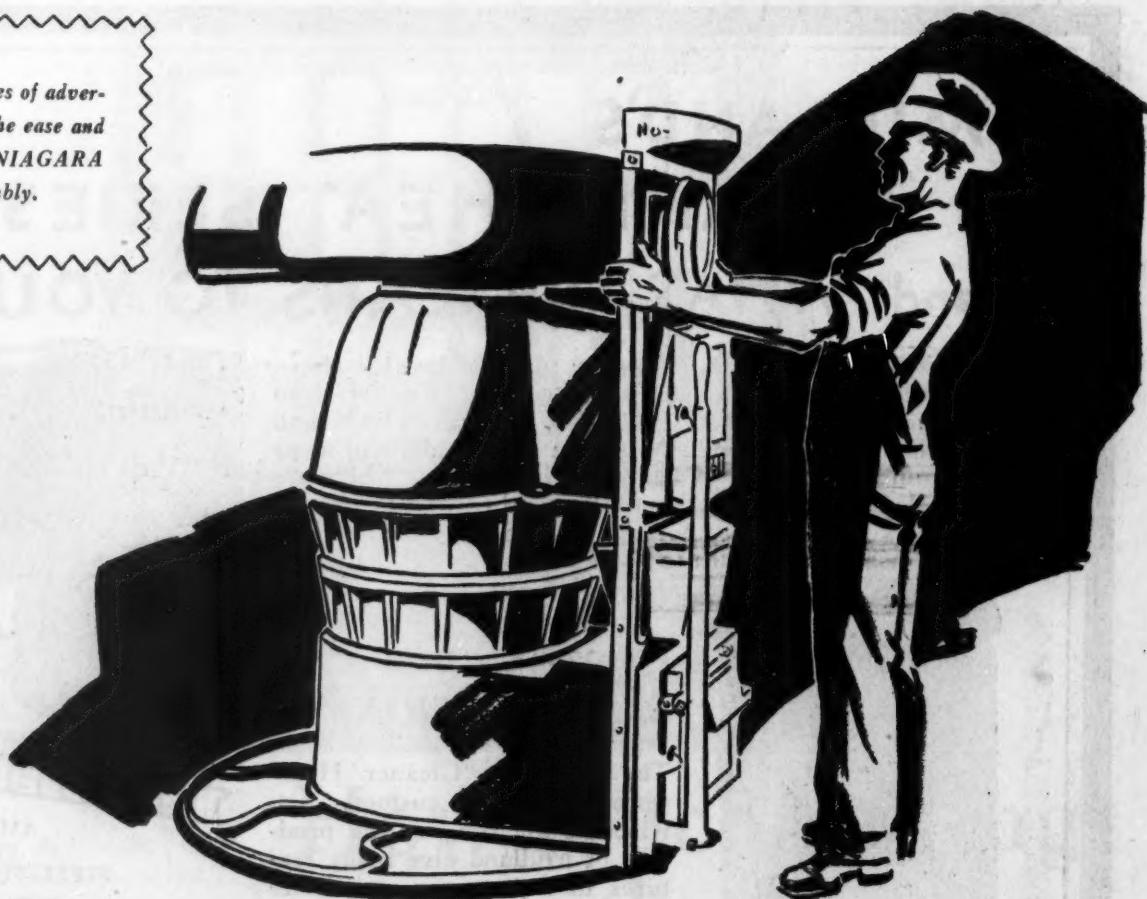
MIDLAND FURNACES

ALL STEEL •••



CLEANER HEAT

No. 5 of a series of advertisements on the ease and simplicity of NIAGARA Furnace assembly.



Assembled ~ Ready for the Casing

EASY assembly! We've been telling you how and why for the past four months on the pages of this magazine.

First, we pointed out the quick and easy leveling of the Niagara One-piece Base.

Then, we showed how the full-cup joints aided in the instantaneous and perfect fit of ash pit and fire pot.

Our next ad illustrated how the feed section literally dropped into place and lined up perfectly.

Last month our ad told you how simple it was to lay on a Niagara One-piece Radiator and obtain a positively smoke-tight joint.

Here's your last operation before affixing the casing. Simply lift the upper front and place it on top of the lower. The Niagara Front is in 2 parts to permit the expansion of the casing without affecting alignment. And by the way, the Niagara Furnace Front in oxidized copper flaked with gold is the handsomest furnace front on the market, bar none.

If you have not read all of these Niagara ads, simply drop us a line and we will send you the complete Niagara assembly series.

THE FOREST CITY - WALWORTH RUN FOUNDRIES CO.

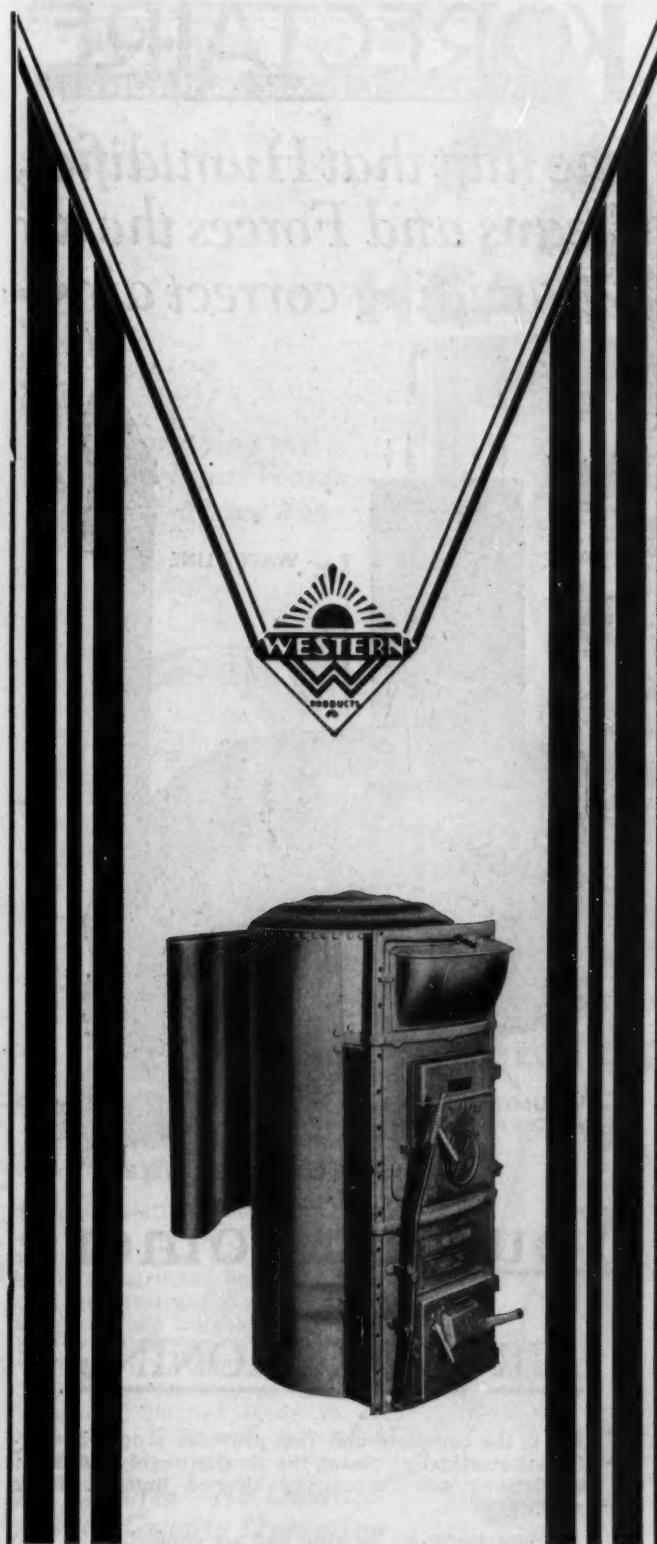
Member National Warm Air Heating Association
2500 West 27th Street — Cleveland, O.



NIAGARA

WARM AIR HEATING SYSTEMS

Say you saw it in AMERICAN ARTISAN—Thank you!



ORE!

More than ever before furnace dealers are looking to the Western for greater sales volume and customer satisfaction. In every state in the Union the Western is known and SOLD.

Built to counteract the biting cold of the Northwest, this modern practical furnace will satisfy the heating needs of customers anywhere. Get in touch with the nearest of our jobbers listed below and let him show you Western's many advantages.

Or write to us for Catalog No. 16.

WESTERN STEEL PRODUCTS CO.

130 Commonwealth Ave. - Duluth, Minn.

Pittsburgh, Pa.—Wagener-Proie Furnace Company.

Ravenna, Ohio—Ravenna Furnace Company.
Cincinnati, Ohio—Nishaus Furnace Repair Company.

Atlanta, Ga.—Moncrief Furnace Company.

Chicago, Ill.—Western Steel Products Company.

St. Louis, Mo.—MacRoy Supply Company.
Kansas City, Mo.—Kansas City Furnace Company.

Duluth, Minnesota—Marshall-Wells Company.

Omaha, Nebraska—A. Y. McDonald Manufacturing Company.

Lincoln, Nebraska—A. Y. McDonald Manufacturing Company.

Sioux City, Iowa—A. Y. McDonald Manufacturing Company.

Minneapolis, Minn.—A. Y. McDonald Manufacturing Company.
Fort Dodge, Iowa—Leighton Supply Company.

Fargo, N. D.—Fargo Cornice & Ornament Company.

Seattle, Wash.—McPherson Furnace & Equipment Company.

San Francisco, Cal.—Pacific Sheet Metal & Furnace Company.

Winnipeg, Man.—Marshall-Wells Company.
Saskatoon, Sask.—Wood-Vallance Company, Ltd.

Regina, Sask.—Wood-Vallance Company.
Edmonton, Alberta—Marshall-Wells-Alberta Company, Ltd.

Notice
the
rounded
corners—



—warm
air
“flows”
through
HANDY
PIPE

WITHOUT Friction

YOU can be sure that your customers get all the warmth the furnace generates—all the warm air that starts up the leader pipes if you use HANDY PIPE.

This pipe has no sharp corners to retard air travel or set up “whirlpools.”

Smooth air delivery may often be the difference between an installation that operates perfectly and one that causes serious complaints. HANDY PIPE is famous for quick, easy and tight locking. It is made of highest grade material by union men in a union shop.

ORDER THROUGH YOUR NEAREST JOBBER

The rush reason finds us ready as usual to fill your orders for *all* warm air installation supplies.

No matter what you need, if it's for installation of warm air furnaces we have it and make a habit of **GETTING IT TO YOU FAST.**



Write
today
for the
complete
HANDY
catalog

F. MEYER & BRO. CO.
PEORIA, ILLINOIS

When writing mention AMERICAN ARTISAN—Thank you!

KORECTAIRE
The CORRECT AIR MACHINE

**The unit that Humidifies,
Cleans and Forces the air
---providing correct air ••**



Your Customers *want* AIR CONDITIONING

HERE is the complete unit that provides proper humidity (automatically) cleans the air thoroughly (without air retardation) and forces the cleaned humidified air efficiently.

Sell complete warm air heating and air conditioning with KORECTAIRE which can be used with any warm air furnace. *Easily installed!*

Notice the high grade waterproof, trouble free motor and fan. Spring mounted and set on sponge rubber plates to eliminate noise and vibration.

Your customers want this added feature—KORECTAIRE is in successful use in thousands of warm air heating installations. It means more warm air heating sales and more profit to you with little added cost to the customer.

Write today for full dealer information and prices.

WATT MANUFACTURING CO.
STERLING, ILL.

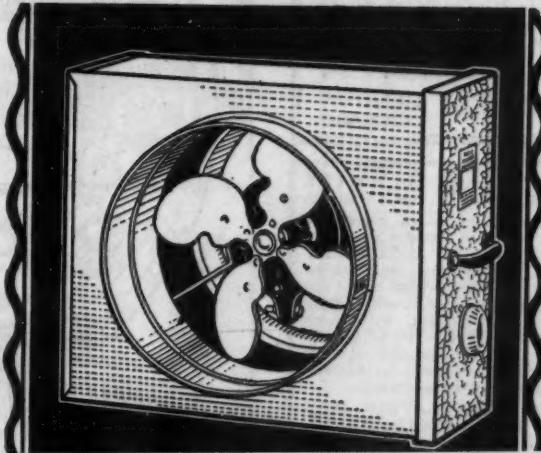
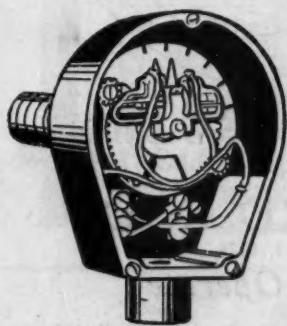
By Far, the Best Buy

A-C

Thermostatically Controlled

Automatic HEAT BOOSTER

*Everything the
Home Owner Wants
in a Furnace Fan*



No. 9 Size Unit with 10-inch Outlets—
for the Average Small Home—Unit
and Fan with Emerson Motor, Mer-
cury Control,—Ready to Install...

**COMPLETE WITH
AUTOMATIC CONTROL**

Larger Sizes for Big Homes and Buildings at Proportionately Low Prices

Quick, Easy Installation at Low Labor Cost

Good Profit on Every Job
**Insured—No Service
Expense**

Simple installation and low labor cost give you a definite price advantage. The unit fits into an easily constructed by-pass of any cold air return and is equally effective with any number of returns. DOES NOT INTERFERE WITH GRAVITY OPERATION—has no louvres, no back pressure. Shipped ready to install—Fan Unit and Automatic Control.

**No Louvres—No Obstruk-
tion to Gravity Operation**

**GET YOUR SAMPLES NOW—
ORDER FROM YOUR JOBBER**

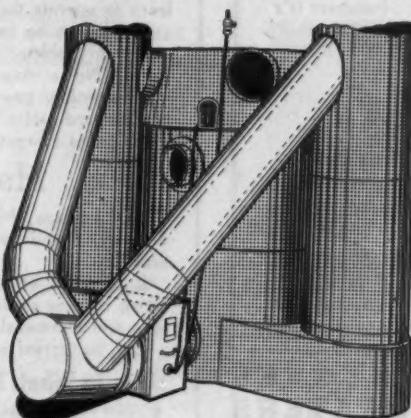
*Get your share of this profitable new busi-
ness—be ready when your customer asks
for your bid. Order samples from your
jobber or send coupon to us TODAY!*

A-C Manufacturing Co.
417 Sherman St.—Pontiac, Ill.

*—At a Price
Every Furnace
Owner Can Afford*

**PRICED
COMPLETE
To The
Dealer at**

\$37.50



**Flexible—May Be Used
with Any Type of
Installation**

Because of its simplicity of design and because its installation amounts to an addition to rather than a change of existing furnace construction, the A-C HEAT BOOSTER may be used with any type of warm air furnace by simply arranging the by-pass construction to suit. Performs equally well with any fuel—coal, oil or gas. Every home owner with a warm air furnace is a prospect.

[Thermostatic Control Warm Air Furnace Fan Licensed Under Re. Pat. No. 15531.]

MAIL COUPON TODAY!

A-C MFG. CO., 417 Sherman St., Pontiac, Ill.

Gentlemen:

Please send complete details about the A-C Thermostatically Controlled AUTOMATIC HEAT BOOSTER.

Name

Street

Town..... State.....

JOBBER'S NAME

BACKED BY EXPERIENCE

Established
1902

Famous For Service



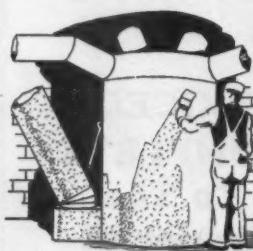
A Better Installation Is possible now with this new Self-Locking Double Stack

CHICAGO Pipe has been the choice of thousands of furnace men for over 26 years—now this improved pipe represents extra value—the result of experience and modern manufacturing methods. It clicks together quickly and easily—stays together and makes a stack of unequalled strength.

Ask about it now—write for our Catalog No. 21—
on Chicago Pipe and all Furnace Supplies

CHICAGO FURNACE SUPPLY CO.
1276-78-80-82 Clybourn Ave. CHICAGO

LIQUID ASBESTOS IN WHITE OR COLORS



BRAND new numbers in attractive fadeless colors in furnace covering, coating, and insulation. JUST WHAT YOU NEED to increase your sales. Each attractive installation sells another. Spreads with a brush. Easy to apply—no cutting and fitting—no paste. TAKES THE PLACE OF ASBESTOS PAPER on old or new furnaces. Apply over tin, galvanized iron, or paper covered surfaces.

MAKE THE INSTALLATION 100% SEAMLESS with LIQUID ASBESTOS, the tailor-made suit for every furnace.

OFFERS NEW SALES TALK

HELPS INCREASE SALES. A trial order is convincing. There are many reasons why every furnace dealer should know about LIQUID ASBESTOS. It's far superior to any other covering.

FIRE AND WATERPROOF

Dealers who are using LIQUID ASBESTOS are getting surprising results. Ask for our SPECIAL DEALERS' PRICES TODAY.
B. & F. MFG. CO., Dept. 7, Des Moines, Iowa

HOWES YANKEE HOT-AIR DAMPER

IT'S STRONG



The most economical because it's better and complete

IT'S TROUBLE-PROOF

Mfd. by
The S. M. HOWESCO.
Dept. G.
Boston, Massachusetts

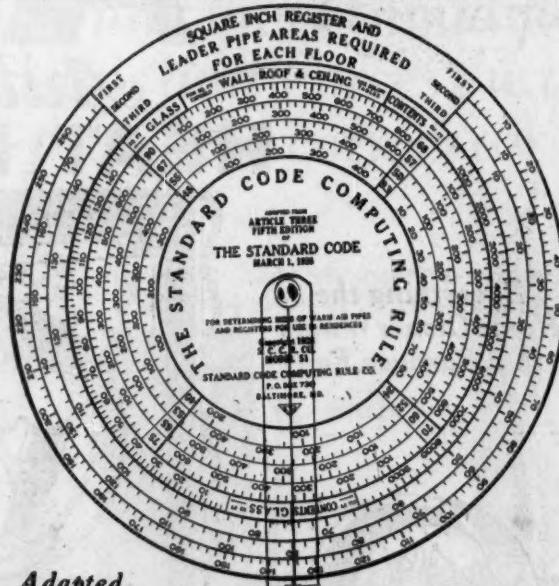
PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

IRON AND WOOD

STOVE PATTERNS
QUINCY PATTERN COMPANY
QUINCY, ILLINOISPATTERNS
FOR STOVES AND HEATERS
VEDDER PATTERN WORKS
ESTABLISHED 1885
TROY, N.Y.

The STANDARD CODE Computing Rule



Adapted
from Article Three 5th Edition

of the
STANDARD CODE

MARCH 1, 1928

Simple to Operate

THE Computing Rule is not a novelty, but, a well designed mathematical device, for figuring leader pipe and register areas for warm air heating systems. It has proven its accuracy in estimating and has passed the experimental stage. It is operated similar to an Engineer's slide rule.

The complete instructions are easily understood. You can learn to operate the Rule in less than one hour.

Results can be had without a single Division, Multiplication or Addition problem, as required in Article Three of the Standard Code. Not a chance for a mathematical error.

"Remember, you do not have to refer to a lot of loose parts or awkward tables."

Simplifies accurate estimating.

Handy Pocket Size

RULES are $5\frac{1}{2}$ inches in diameter— $\frac{1}{8}$ inch thick. Has an upper and lower revolving disc with a hairline indicating arm.

It is made of extra heavy and specially prepared celluloid, which reduces shrinkage and warping to a minimum. It is washable and unbreakable.

Can be carried comfortably in your pocket.

Here Is What The Computing Rule Will Determine:

- 1 The warm air pipe and register areas for First, Second and Third floor rooms.
- 3 The areas from the contents, Glass, Wall, Roof and Ceiling. The factors as covered in Table "A" are represented in accurate form.
- 2 The areas necessary for 70° inside temperature when the outside temperatures are ZERO, 10 , 20 and 30 degrees ABOVE or BELOW zero.
- 4 The areas for rooms having One, One and One-half and Two air changes per hour.
- 5 The Unusual Exposure requirements as the 10% for East and West and 15% for Northeast, North and Northwest rooms.

"Absolute Correct Results"

Price, \$3.00—Postpaid

AMERICAN ARTISAN

139 North Clark Street
CHICAGO, ILLINOIS

"GEM" ADJUSTABLE REGISTER SHIELDS

Adjustable
10 in. to 19 in.

Orders keep coming in from all over the country—wherever warm air furnaces are used, "GEM" Adjustable Register Shields are bound to be popular. Stock and display them, and reap your profit.

For all size registers. "GEM" Floor Shield, Black retails at \$1.25; Dull Brass or Oxidized Copper at \$1.50; "GEM" Wall Shield, Black, 65c; Dull Brass or Oxidized Copper, 75c.

1140 BROADWAY, NEW YORK, N.Y.
BUY FROM YOUR JOBBER.

BEH & CO.

BOLTS

We manufacture a complete line of bolt products, including stove bolts, carriage bolts, machine bolts, lag bolts, nuts, cotter pins, etc. Also stove rods, small rivets and hinge pins. Catalog on request.

THE LAMSON & SESSIONS CO.
THE KIRK-LATTY CO.
1971 W. 85th St. Cleveland, O.

McILVAINE
OIL BURNER
Listed by Underwriters

Adaptable to warm-air furnaces because the McILVAINE System of continuous flame insures no cracking or burning of fire pots, but produces even, dependable heat.

Not an Intermittent Burner

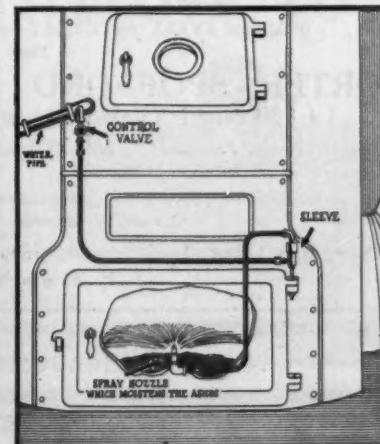
DEALERS: Write for information today.
McILVAINE BURNER CORP., Dept. A, 747 Custer Ave., Evanston, Ill.

SERVICE

American Artisan receives thousands of queries yearly. If there is anything used in your business which you can't find advertised or listed in the Buyers' Directory of American Artisan, write to our *Notes and Queries Department*. Give all the details you can and we will tell you where to obtain the materials or services you want.

AMERICAN ARTISAN

Make more sales by offering this feature on every FURNACE INSTALLATION



The FURNACE DUST ELIMINATOR

IT keeps dust from spreading throughout the house—makes ash removing a clean job—makes furnace more efficient and prevents burnt out grates.

Your customers despise the dirty job of removing ashes—this feature will appeal to them.

It costs little but makes more profitable sales for you.

Furnace Manufacturers & Jobbers

HERE is a new exclusive patented feature you can adopt for your line of furnaces. Easily attached on the water connection and ash pit door. Sleeve joint enables nozzle to swing out of the way with door for removing ashes.

Write for illustrated circular and prices today

DUSTLESS ASH COMPANY
MUSKEGON, MICHIGAN

KU-NO



The Practical Warm Air Register

EASIEST to remove—only a slight pressure of the thumbs against top of frame with grip on face as illustrated is necessary.

No Screws—No Springs
KU-NO is the NEW patented register everybody is praising for its attractive design, simple and No Jar or Vibration locking device and FREE AIR CAPACITY.

Write for illustrated circular and prices today. Give us your Jobber's name.

KU-NO REGISTER MFG. CO., St. Louis, Mo.

THE "Alamo" LINE

of CHARLES SMITH WATER HEATERS

The ALAMO CROSS HEATER
for Combination Warm Air and Hot Water Heating

Three Sizes Connected

INSTALLED in center of furnace above the fire it does not interfere with heating efficiency of furnace or firing. It receives maximum heat and deflects heat to sides of furnace. The Alamo Cross is made in 11 sizes to heat with hot water radiation from 1 to 10 rooms. High grade throughout—rounded corners eliminate all friction. Made for all types of warm air furnaces.

Manufactured by the makers of the Little Giant, Geyser and Crescent Hot Water Heaters. Place a trial order now.

Write for descriptive circular today

ALAMO HEATER CO.
6143 Wentworth Ave. CHICAGO, ILL.

Founded 1880

American Artisan
The Warm Air Heating and Sheet Metal Journal

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CHICAGO, NOVEMBER 2, 1929

\$2.00 Per Year

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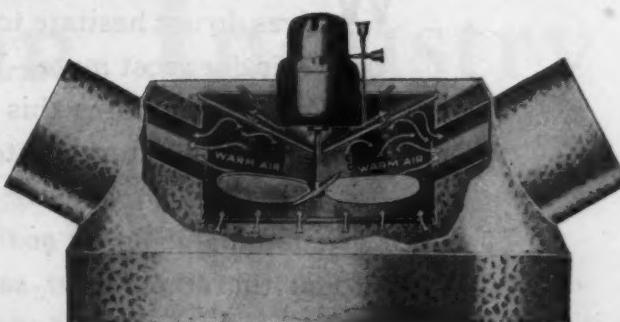
**41
JOBBERS
CARRYING STOCKS IN
65
CITIES IN THE UNITED
STATES AND CANADA**

BAKER-PAYNE-VOYE CO....Boston, Mass.
THE BECKWITH CO....Dowagiac, Mich.
BERGSTROM MFG. CO....Neenah, Wisconsin
CARR SUPPLY CO.....Chicago, Ill.
DAYTON-HESSLER CO....Syracuse, N. Y.
DEMMELER BROS. CO....Pittsburgh, Pa.
DOWAGIAC STEEL FURNACE CO....
DOWAGIAC, Mich.
FARRIS FURNACE CO....Springfield, Ill.
C. L. FEATHERSTONE FURNACE
CO.Spokane, Wash.
FOLLANSBEE BROTHERS CO., Pittsburgh,
Rochester, Cincinnati, Memphis, Detroit,
Indianapolis, Milwaukee, Louisville.
FLORAL CITY HEATER CO., Monroe, Mich.
FOX FURNACE CO.....Elyria, Ohio
HEATING & SUPPLY CO., Pittsburgh, Pa.
HENRY FURNACE & FOUNDRY CO., Cleve-
land, O.; Indianapolis, Ind.; Pittsburgh, Pa.
M. K. HOKE ESTATE....Manheim, Pa.
HOMER FURNACE CO....Coldwater, Mich.
IDEAL FURNACE CO....Detroit, Mich.
INTERNATIONAL HEATER CO., Utica,
Chicago, Cleveland, Nashua, New Hamp-
shire, Longbranch, N. J.
KALAMAZOO STOVE CO., Kalamazoo, Mich.
KELLEY-HOW-THOMSON CO.,
Duluth, Minn.
KELSEY HEATING CO....Syracuse, N. Y.
W. E. LAMNECK CO....Columbus, Ohio
LENNOX FURNACE CO., Inc., Syracuse, N.Y.
LENNOX FURNACE CO. OF CANADA,
Ltd., Toronto, Ontario & Winnipeg, Man.
THE MAJESTIC CO....Huntington, Ind.

MARSHALL-WELLS CO....
Duluth, Minn.; Billings, Mont.;
Great Falls, Mont.

MAY-FIEBEGER CO., Newark, O.; Akron, O.
MIDLAND FURNACE CO., Columbus, Ohio
MONCRIEF FURNACE CO....Atlanta, Ga.
NEW IDEA FURNACES, LTD.,
Ingersoll, Ont., Can.
THE OHIO SHEET METAL & MFG.
CO.Dayton, Ohio
J. M. & L. A. OSBORN CO.,
Cleveland, O.; Buffalo, N. Y.
PEASE FOUNDRY CO., Ltd.,
Toronto, Ontario, Canada
PENINSULAR STOVE CO....Detroit, Mich.
PORTLAND STOVE FOUNDRY CO.,
Portland, Maine
RICHARDSON & BOYNTON CO., New
York, Chicago, Boston, Philadelphia,
Buffalo, Minneapolis, Newark, N. J.
THE SCHILL BROS. CO....Crestline, O.
SUCCESS HEATER MFG. CO.,
Des Moines, Iowa
WESTERN STEEL PRODUCTS CO.,
Duluth, Minn.
GEO. F. WHEELOCK CO., Birml'gh'm, Ala.
WISE FURNACE CO....Akron, Ohio

*Now is the time to
call your customers'
attention to the—*



ROBINSON Heat Distributor

MANY dealers put a Robinson Heat Distributor in their car or truck when making furnace calls of any kind. They find that showing it paves the way for more sales.

Folks can't help being interested.

The Robinson Heat Distributor is so simple and efficient that every man who has a warm air furnace heating system in his home wants to know all about it.

Its operation is easy to explain—its efficiency is easy to demonstrate and its economy makes it easy to sell. Try this business getting idea now with this business getter.

*Our nation wide jobber connections
insure prompt delivery from stock.*

HERE IS ANOTHER NEW ONE

Consult this jobbers' list—there is a jobber near you who will send full details, circulars and prices.

The Robinson Heat Distributor is easy to install. No large material and time charges for alterations to cause resistance to sales.

Start now to make worth while extra profits with this fast selling furnace fan.

Manufactured by

The A. H. ROBINSON CO., Massillon, Ohio

THE WEIR DOES COST MORE

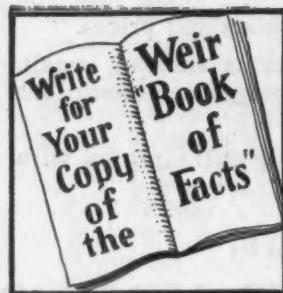
WEIR traveling sales representatives do not hesitate to tell you that the Weir *does cost more*—Weir advertising frequently states this fact and right now seems an appropriate time to say it again. The *price* of the Weir tells you something about its *quality*—it also tells you that the *dealer sales policy* under which it is sold is *sound and fair*.

The quality of the Weir is always the same—as *high as we can make it*. The price is always the same—as *low as we can keep it for* the quality offered.

The fact that the Weir costs more is proof that we build the Weir up to the highest standards known and not down to meet a given price.

Good, healthy business for Weir dealers proves to us that this is sound business sense as well as an ideal situation which tends to elevate the warm air heating business.

Prove it yourself—a Weir on your sales floor will give you a new enthusiasm for better warm air heating—you'll know you are selling real quality and your customers will easily see its greater worth—and gladly pay you a larger profit.



**THE MEYER FURNACE CO.
PEORIA-ILLINOIS**



American Artisan

The Warm Air Heating and Sheet Metal Journal



Vol. 98

CHICAGO, NOVEMBER 2, 1929

No. 18

Selling an Industry to the Public

IN OUR issue of September 28 there appeared an editorial entitled, "A Challenge, or Just More Rope?" It concerned itself with a furnace advertisement of a mail order house appearing in the *Saturday Evening Post*, and attempted to illustrate how miserably the advertiser had failed to recognize his responsibility to the warm air heating industry by completely ignoring a splendid opportunity to do the industry a good turn. In this case it would not in the least have impaired the effectiveness of his copy.

Fortunately for the furnace industry, all of its advertisers are not so lacking in their recognition of the fact that they do have a duty to the industry in general. Nor are they afraid to do something about it. The accompanying reproduced advertisement is that of a furnace jobbers appearing in the medium mentioned above on October 19.

IT IS not known whether that manufacturer was inspired by what we said in our editorial of September 28 (we would like to think that he was so inspired what we said) or

whether it was just one of those peculiar coincidences that so often happen. But, irrespective of how it came about, the fact remains that the ad did appear and its content typifies exactly the idea we had in mind when writing the editorial.

This jobber has produced an advertisement that will not only bring

his own company good returns, but it cannot fail at the same time to have a good effect upon the entire warm air heating industry. Our only regret is that it is only one advertisement. If only more manufacturers could see their way clear to do likewise, the service the industry has to offer, as well as its superior merit, would soon be well known to the public.

IN THIS connection the warm air furnace manufacturers could learn a great deal about the psychology of merchandising from the automobile industry. An incident will illustrate. One day last week a manufacturer of electric trucks ran a full page advertisement in the *New York Times*. In it he naturally listed many of the outstanding reasons why it is to the advantage of commercial houses who have use for trucks to place their confidence in electric trucks. The remainder of the ad was couched in language somewhat of the following nature: "Of course, we want to sell you our electric truck, but the main object is to sell you on the ad-(Continued on Page 23)

THE SATURDAY EVENING POST

October 19, 1929

'Yes, sir—I've had my fill of resting inside the radiator and freezing outside the window. I'm sick of dodging drafts. I'm tired of dry walls and draperies. I'm sick of bills for winter heat. I'm sick and ready to find out about the new, revolutionary Follansbee method of heating. Send me the full story and your booklet "Just Weather in Jewelry Boxes".'

Name _____
Address _____

Finding this coupon may win you a \$100.00 prize. Every \$100.00 spent on Follansbee Fresh Air Heating Systems will entitle you to enter once in our contest. Better double all entries.

**ORDERS taken now
for JUNE weather this winter**

**Something New has Happened
in Home Heating**

It's waiting for you! The balmy warmth of sunny June days—in every room of your home—even day all winter!

Not just heat—but a fresh, pure, uniform atmosphere—the atmosphere that makes summer days the ones you look forward to all the year.

Not stuffy hotness at one end of the room and icy drafts in the other—but smooth, even, pleasant temperature all through the house. Do you get this new kind of winterizing comfort in your home now?

Hundreds of American dwellings—new and old—large and small—have begun to have this new winter livability—brought to them by the Follansbee Fresh Air Heating System. By the modern, scientific, Follansbee method of heating for health. Houses that never

dust and dirt the elimination of colds and other winter troubles that are part and parcel of old-fashioned heating methods.

And best of all—the new convenience, comfort, cleanliness and health are obtainable at lower cost, both of installation and maintenance, than the average home heating system.

FOLLANSBEE BROTHERS CO., PITTSBURGH, PA.
Manufacturers of Follansbee Fresh Air Heating Systems.
Warehouses and Distributors in Principal Cities of the United States.

**Something New has Happened
in Home Heating**

Before have known the luxury of comfort this new system brings—the freedom from heating trials—the banishing of

Follansbee
FRESH AIR HEATING SYSTEM

The Follansbee Ad, Counteracting Detrimental Effects of a Mail Order Ad

Seam Design Knowledge

A Necessary Part of Sheet Metal Worker's Training

By Adolph Kealer,
Instructor in Sheet Metal, Washburne Trade School



A. Kealer
Associate Editor

A VERY essential part of the sheet metal worker's training is the knowledge of designing the right kind of seam or joint for any particular sheet metal job.

Seams should be placed in such a position so as to be practical and economical, considering the standard size of sheets used.

This plate shows a few of the seams and joints mostly used.

Fig. 1. The ordinary lap seam.
Fig. 2. The countersunk lap seam.
Fig. 3. The folded seam. Fig. 4.
The grooved seam.

Note: When using the grooved seam, attention should be given to the requirement, whether the article made should have the seam flush on the outside or inside.

Fig. 5 shows a ventilating pipe on a rail grooved inside and flush outside. This lock is formed by pounding the locked edges with a mallet into the groove of the rail.

Fig. 6 is a riveted seam. Note: The allowance for a riveted seam should never be less than three times the thickness of the rivet.

Fig. 7. The inside corner lap.
Fig. 8. The outside corner lap.

Figs. 9 and 10. Standing seams.
Note: In round or rectangular ventilation pipes, grooved or riveted seams are generally used, but in cases of very large rectangular pipes

near as possible to the standard size sheets used.

Figs. 20, 21, 22 and 23 are examples of joints in cornice work.

**Ed. Gardner Activities
Not Confined to Sheet
Metal Business**

Edward A. Gardner, junior member of the firm of Joseph Gardner Co., 147 Kentucky Ave., Indianapolis, Indiana, was elected vice-president of the General Protestant Orphan Association, which was founded in 1867 by members of the various German Protestant churches and societies, and is one of the oldest orphan associations in Indianapolis.

Joseph Gardner, Ed.'s father and past president of the National Association of Sheet Metal Contractors, has also been very active in the affairs of the orphan association.

**Chas. Asmussen, Muskegon,
Mich., to Remodel Shop
During Coming Year**

The Charles Asmussen Roofing Company, 154 Ottawa Street, Muskegon, Michigan, are planning an addition to their workshop and office space during the coming year, and although they now have one of the most attractive looking sheet metal establishments in their city, it

a standing seam is used as a stiffener. Figs. 9 and 10 are examples of this nature.

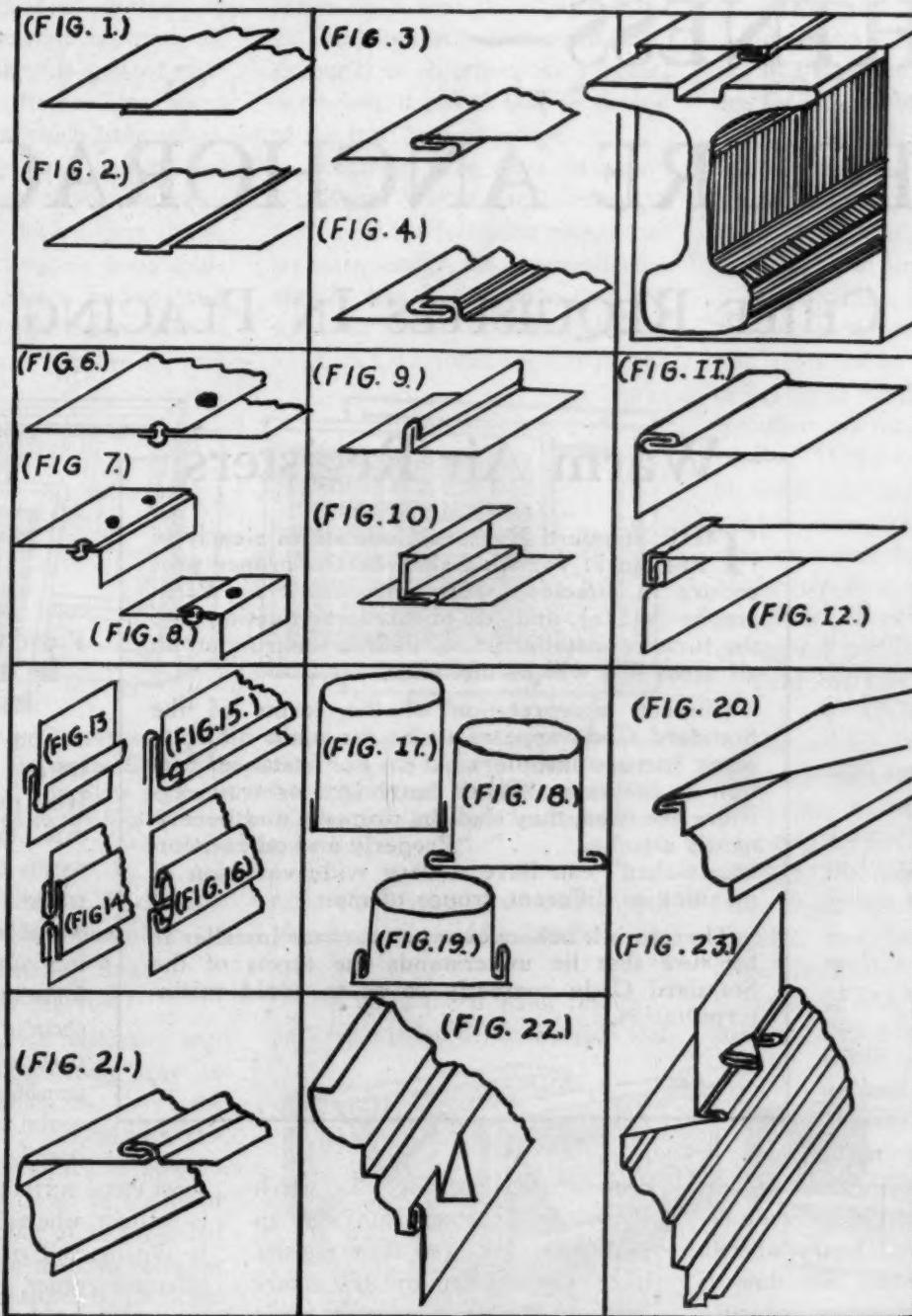
Fig. 11. The corner lock seam or double seam. Fig. 12. The Pittsburgh seam. Note: The Pittsburgh seam is generally used as a corner seam in ventilation work, such as pipes and fittings.

**Pipe Joint Connection by
Means of Slips**

To connect joints of rectangular pipe, the four slips shown here are generally used. Fig. 13. The S slip. Fig. 14. The double S slip. Fig. 15. The slip with the rolled bead. Fig. 16. The drive slip or cleat.

Joints for Cornice Work

When detailing cornice designs it is well to know the approximate amount of metal required, in order to be able to locate the seams as



Constructing Patterns for Seams

is the intention to make a special provision for a window display that will permit the adequate showing of their products.

Charles Asmussen, head of the company, stated that there is a merchandising problem involved in the sheet metal and warm air heating business which few men in the industry have to date been willing to recognize.

"You see," said Mr. Asmussen, "our establishment is located on the only outlet to the north of Muskegon. All traffic leaving and entering our city from the north must pass

in front of our shop. Now it is our intention when we build our addition next year to take full advantage of this fact and put a display window in that will properly advertise our products and services, and give the public the impression that we are specialists in our line just the same as an engineer in any other line."

The appearance of the present shop and office of the company would give that impression. But Mr. Asmussen will not be satisfied until he has a window display properly equipped with lights so as to keep his business before the public.

A very convenient arrangement obtains in the warehouse of the Charles Asmussen Roofing Company. The warehouse floor is raised to a level of the truck bottom. Trucks backed into the warehouse can be loaded or unloaded with little or no great lifting of the products. It saves time and effort in storing or delivering furnaces, sheet metal items and other roofing products.

Mr. Asmussen also stated that his sheet metal business was about double that of last year and it all will show a good profit.

TIGHTNESS— SECURE ANCHORAGE— CHIEF REQUISITES IN PLACING

Warm Air Registers

MAKE them tight and dust-proof is the main consideration in properly attaching warm and cold air registers in a warm air heating system.

Next in importance is stream line design of intermediate pieces, usually known as boxes.

Dirt streaks about registers are directly traceable to cracks outside the borders. Either the aperture has been inaccurately cut or the connection slovenly made.

Failure of certain rooms to heat often may be charged to crude design of boots and boxes wherein obstruction to warm air flow is offered, with consequent reduction of the quantity of warm air supplied.

Eliminate Sharp Corners

With reference to sheet metal register boxes, the general rules are that the throats of the duct openings must at least equal the warm air leaders to which they are connected, be free from sharp corners and opposing surfaces which offer back pressure.

Finished connections demand, further, that all burrs, lips, seams and similar protrusions be bent smooth and joints be as nearly tight as possible.

The foregoing points are well

THE Standard Furnace Code states clearly in Section 7: (a) what shall be the proper procedure in attaching warm air registers. Paragraphs (b), (c), and (d) of this same Section give the furnace installer pretty definite instruction on all cases that will be met with.

Correct interpretation of the terms of the Standard Code appears to be the main difficulty many furnace installers have. For instance, Section 7. (a) says: "When baseboard or wall registers are used, they shall be properly and permanently attached . . ." "Properly and permanently attached" can have a very wide variation of meaning to different groups of men.

Therefore it behooves every furnace installer to be sure that he understands the terms of the Standard Code correctly so as to avoid misinterpretation.

demonstrated in Fig. 1, which shows, left a transition from an oval riser to a deep floor register box. Construction of this nature might occur when necessary to avoid a joist or other obstruction. The correct design is shown in the same figure, at the right.

Arrows in the illustration at the left reveal what takes place when warm air supply strikes the top of a horizontal pipe to which a vertical duct is connected. Were one to throw a pail of water against a similar surface, he would be thoroughly wet from the splash. The action of a warm air stream is identical, only not visible to the eye. That is, a back pressure is set up which retards the free flow of heat. The ultimate effect is forcing the furnace to generate more heat to over-

come the back pressure.
**From Oval to Round
by Full-Throated
Round Elbow**

Note the right illustration, by contrast. Here the transition from oval to round is by means of a full-throated round elbow. As the warm air hits the sloping surface only slight impediment to its force occurs. The same comparison is noted in the transition from the horizontal section to the register box. The opposing

sheet metal surface in the left figure is straight, whereas that at the right is sloping and of full area. The offensive corner, in reality a dead air pocket, has been chamfered.

A like condition is found in the stack heads. In Fig. 2 there are shown a double connection, with flat top, right, and with a deflecting tee, left. Imagine a current of warm air coming up both designs. In the right figure the air stream would strike the top of the head with a slap, then pass out through the two side openings into which registers are to be set. In the left hand design the air current would strike the V of the yoke, then pass out the openings, but without substantial impediment to its flow because the direction has been gradual.

Lest it be understood that the

evil result described as occurring in the design at the right is universal, let it be said that this type of connection usually receives baseboard or wall registers which have valves or louvers. These may be hand operated to give right connection piece. Some installers nevertheless install registers without valves, those similar to floor registers having snub louvers. It is by no means rare to find floor registers installed as wall

passes up a heat stack at substantial velocity, with the result that, although its objective, the register, is reached, it cannot take advantage of the total area of escape.

Register Free Area Must Equal Warm Air Leader

It is for the foregoing reason that registers under no circumstances may be less in free area than the warm air leader, or basement duct, to which a particular register is con-

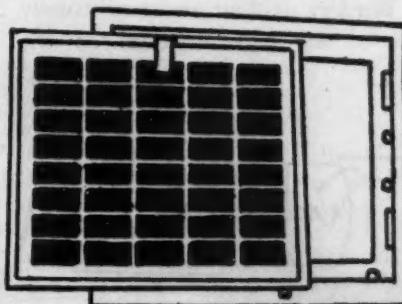
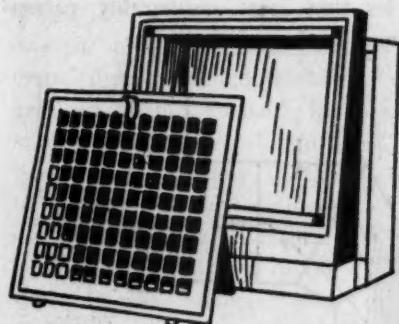


Figure 1—Showing a Baseboard Register Attached to a Stack Head with Face Removed. Note the Space Behind the Grille. At the Right a Wall Register Face and Frame. The Slots at the Right Are for Sheet Metal Straps Which Should be Soldered to the End of the Duct Collar, Put Through the Slots, Then Peened Down

registers and under the detrimental conditions heretofore described.

What If Studding Spaces Are Too Narrow?

A correctly valved baseboard register, before installation, may be seen in Fig. 3, which also shows the valve immediately behind the lattice face. A downward or upward push of the little lever at the front adjusts the opening of the required size. Were there no total valve, as is sometimes encountered, frictional resistance would reduce the heating effect.

Studding spaces may be too narrow to permit satisfactory heating with a single register. Some artisans, to overcome the handicap, join on registers of narrow width and greater height; that is, they install registers on their side.

This is a profound mistake because experiment has shown that only the upper two-thirds of a wall register performs actual service on account of the velocity of the warm air within. A homely illustration might be that of a railway train which passes its station due to momentum. Warm air in heating

connected. A margin of safety, say 10 per cent, provides beneficial results.

One hears much about the comparative merits of baseboard and

enter a baseboard register.

For second floor rooms baseboard and wall registers are standard practice for reasons of sanitation, effectiveness—by offering less obstruction to heat flow—and being above the floor, the strata of cool air always found there cannot interfere with the warm supply.

This condition is noted frequently on upper floors and requires that wall registers be placed at least 9 inches above the floor, otherwise the cool floor air may impede the heat supply. If the warm air supply is of weak velocity and registers are too low, cases are by no means uncommon where the downward force of the cold floor air is greater than the upward current, hence the warm air register acts as a cold air exit.

Cold Air Circulation Needs Attention

If upper floor warm air registers were attached to the same risers that admit heat to the first floor, and were cold air to fall down the warm air duct, the heating value of the entire stack will be nullified. It is singular that great attention is given the matter of circulation of warm air in a building being heated with a furnace and comparatively

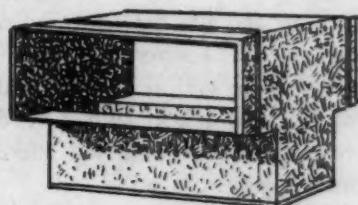
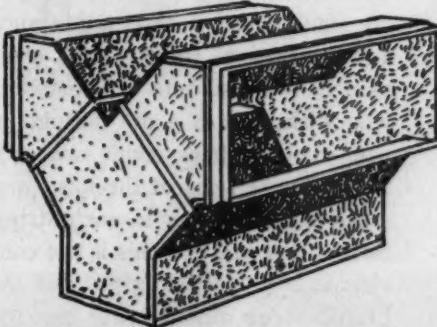


Figure 2—Two Designs of a Double Combined Stack Head and Register Box. The Design at the Left Offers the Best Principles Since It Facilitates the Split of the Air Current by Eliminating the Sharp Turn Seen in the Box at the Right

floor registers for heating first floor rooms. In certain western states the former take precedence. In eastern states floor registers are more common at present. So far as effectiveness in heating is concerned, there is little difference. From the standpoint of sanitation and rendering a warm air plant beyond criticism there is no doubt but that floor registers pick up a great amount of dirt which would not

little to cold air circulation. Many scientific studies concern warm air distribution, whereas it is equally important to know what becomes of the air along the floor line. Misplaced registers often tell the tale, through bad example.

Effort to save time and labor cost are underlying causes of register failure. Sometimes, for example, one sees in residences completed only a few months fair sized cracks

around the borders of registers. If they are in floors, lint and dirt gather in the cracks, while if they are baseboard or wall registers, the walls directly above the registers become dirt streaked. This condition, too, is seen often on ceilings.

Cases have been observed where wall registers loosen at their tops. Unless corrective measures are taken they have been known to fall out entirely. Looseness comes from neglect to solder galvanized sheet steel straps, at least one inch wide, to the ends of the register boxes.

Straps should be thrust through slots provided in the register frames bent down, and they may be soldered. The faces then are screwed firmly into frames. It is excellent practice, too, to lay felt gaskets, one-eighth inch thick, between the frames and faces before screwing. No looseness, then, can exist unless screws loosen. This they are unlikely to do, as the straps of the sheet metal box support the frames and perform the bulk of the work.

Instead of sheet iron straps some installers leave flanges on the edges of the register boxes and bend them over the frame all around, as shown in Fig. 3. If a felt or cork gasket is set on and the face screwed on, tightness is assured. There is nothing to be said in defense of the installer who takes neither of the foregoing precautions, but merely screws registers to walls.

This is a poor practice and should be discouraged at all times. Under this process an opening is left in the walls, the register boot set into the opening, then the register flanges simply screwed to the lath and plaster without gasket of any kind. The criticism is that in time the screws work out through insufficient foundation. Cracks then permit the exit of soot and dust which streak walls and ceilings.

Quoting the Standard Code

The Standard Code of the National Warm Air Heating Association suggests that "When a baseboard or wall register is used these must be permanently attached to the stack heads," and that floor regis-

ters "Shall be provided either with register borders or double register boxes of tin or galvanized iron, with an air space of not less than five-sixteenths inch between inner and outer boxes." These directions bring out the important points that registers must be rendered free from provoking fire hazard and must be so substantially set in place that constant travel over them will not weaken their snugness.

Borders of floor registers usually are of the same material as the

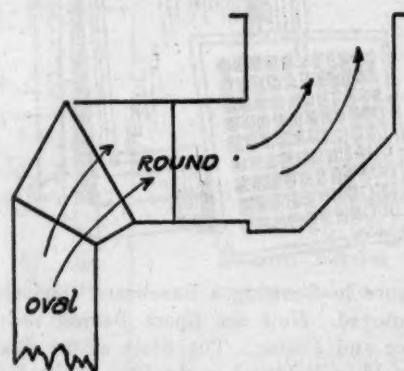
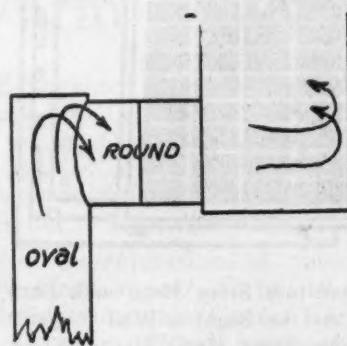


Figure 3—The Incorrect Method, Left, and the Correct Method, Right, of Making a Transition from an Oval Riser to a Floor Register in Warm Air Heating

faces today, although outer slate borders are still favored in some localities. Insetting so that faces are level with the floor is desirable from the standpoints of good appearance and freedom of travel. It is common in some sections for installers who wish to rush a job through to nail wooden strips about one inch square to the sides of the joists and screw register faces to such strips. Such a procedure as this is not considered a good plan because of the likelihood of dust passing through the crevices between frames and wood strips. If manufacturers of register boxes provide a flange on their outer edges, these may be bent down, a washer laid on and the face screwed down, thus making a substantial yet fairly quick method of connection.

Mass Output Brings Higher Wages, Lower Costs—Glenn Frank

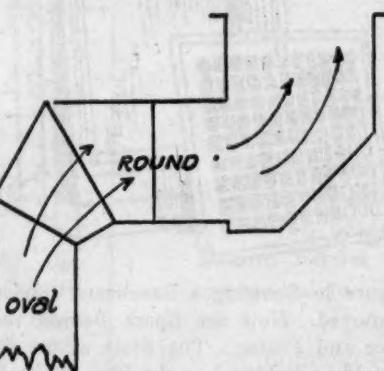
Many superficial critics of our machine age regard mass production as simply a slick scheme for swelling profits on shoddy goods.

Genuine mass production is, on the contrary, one of the most socially valuable methods modern mankind has evolved.

It means specialization on articles that have the greatest possible value to the greatest number of people.

Genuine mass production does not follow the whims of the period or fall into step behind the will-o'-the-wisps of capricious fashion.

It centers its operation upon articles that meet measurably permanent needs and demands.



It seeks the utmost simplicity of design consistent with essential utility and beauty.

It declines to use other than durably excellent materials in manufacture.

It strives to put such good material and such good workmanship into its articles that their intrinsic merit will be their most effective sales argument.

It strives to put its wages high so that many may be able to buy.

It takes imagination, insight and ingenuity on the part of the managerial minds of industry to see the logic and the profit in the full run of the philosophy of standardization, mass production and mass distribution as I have here suggested it.

When the contagion of their success has spread widely enough, we shall see that mass production is one of the instruments the humanity of the future will use to achieve sound social progress.—(By Glenn Frank, president, University of Wisconsin, writing in his column, "Unconventional Views of Life," in the Chicago Daily News.)

Tell Folks About Good Work You Do

By George Duerr

LITTLE doubt exists in the mind of Charles L. Gatz, sheet metal contractor and warm air furnace installer, 804-06 Washington Street, Gary, Indiana, that to be successful the business must be properly advertised.

Mr. Gatz has been in the sheet metal business for more than thirty years. He began operations in a small way in a shop that was hardly large enough to turn a length of gutter in. And now he operates a representative sheet metal shop and is one of the best known contractors in Gary. During his thirty-year sojourn in a business that is supposedly so fraught with pitfalls and little jokers that the mortality rate is very high, he has built up a fund of knowledge and experience on advertising that will aid many of the younger men to avoid much trouble.

In the conduct of his business Mr. Gatz has adhered closely to two beliefs which he formulated early in his business career, namely, to do good work at all times and to advertise consistently and constantly. In his opinion, no man can hope for permanent success in his business on any other basis.

"Good workmanship and ad-



Unusual Type of Advertising Indulged in by Mr. Gatz

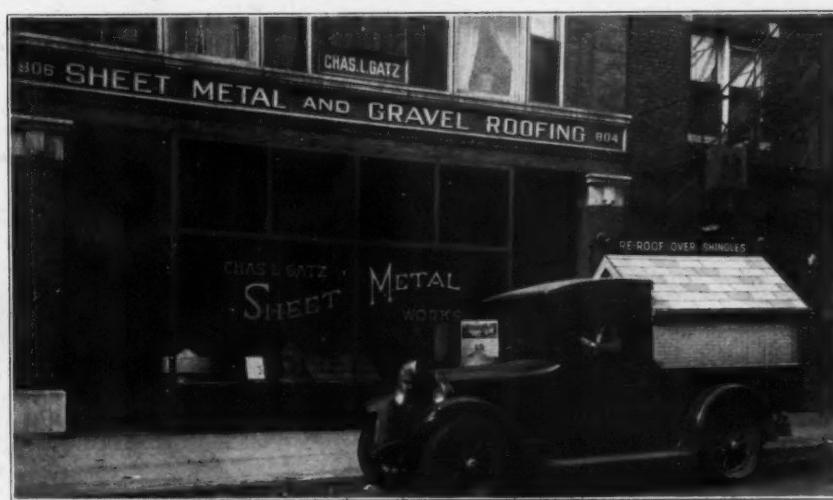
vertising go hand in hand," said Mr. Gatz. "I've made mistakes in the conduct of my business, as every one else has, and some of those errors

have been pretty costly to me, but through them all I have never deviated from the original policy with which I started out—to do the best work I knew how and to keep my name before the public.

"I said that good workmanship and advertising go hand in hand. As a matter of fact, they are almost one and the same, because if you do good work at all times, the cumulative advertising value that accrues to you therefrom goes a long way toward assisting you in making the grade. It will come in mighty handy to you when the weeding out process begins to work. It will stand you in good stead all through your future business career. All people expect to get good work done. Some of them don't expect to pay for it, of course, but that is human nature. Therefore, the embryo contractor cannot begin

too early in his career to let all those concerned see that he has the ability and the willingness to give reliable service and that he does not expect to do it for nothing.

"That process is what is commonly known as building a reputation. The big difficulty is that many young contractors fail to



Metal House Built on One of Gatz' Trucks Keeps Name and Business Before Gary Public

"Make Your Shop Look Like a Business Establishment" Says Chas. L. Gatz

"Appearance Goes a Long Way Towards Attracting the Right Kind of Customers."

realize that it is much easier to build a poor reputation than a good one. Consequently they fall into ways of doing things that cause them a great deal of trouble and lost motion to correct if they are ever able to correct it at all.

"I have assurance and proof that advertising to be effective must be consistent and truthful, and more than just one way of advertising must be employed. Buying four or five inches of space in a newspaper once a week, even though it is done every week the year round, is not advertising in the true sense of the word. I give all the methods of advertising a chance.

"For instance, here's a group of newspaper advertisements that I have used. But I don't stop at that. There's a calendar over there (pointing to a large calendar on the wall with an attractive picture and the firm name in bold letters), I know that calendar will be preserved because it is useful and at the same time not an atrocity. In its design I have endeavored to keep my name before the recipient in a way that is not too obviously an advertisement.

"Of course these calendars are not distributed promiscuously. They are given to business houses and contractors who during the course

of the coming year are going to have need of my services. Every one

needs a calendar and if it is an attractive one, it is going to be found

Sheet Metal and Furnace Contractors in All Parts of the Country Are Beginning to Realize the Value of This Type of Merchandise Effort.



Window Display Used by Mr. Gatz to Let Folks

ers House,"
Chas. L. Gatz

*Toward
ustomer"*

hung up on the wall in plain sight and retained there during the year.

give to contractors and architect friends, and you'd be surprised at



Gatz to Let Folks Know He's in Business

TOBOGGANS

For Sale by
Chas. L. Gatz

804 Washington St. Phone 2-2705
Residence Phone 2-2519

Mr. Gatz Is in a Locality Where Tobogganing Is a Regular Winter Sport

"The same applies to pencils. I have a certain number of these made up during the year; not the ordinary kind of common lead pencil, but attractive ones that will not get out of order the first time they are used. These I

the effectiveness with which they serve to remind the architect or contractor of their donor. Of course, here again one must use care in selecting this type of advertising. Remember that a pencil can convey a bad impression as well as a good one. Pencil advertising the way I do it is expensive, but worth while.

"A short time ago I hit upon the idea of using this card (reproduced herewith) on the string by which the telephone directory is hung up. The card is yellow in color and, therefore, an eye catcher. The hole through which the string is passed is rimmed with metal so that the card will not be easily torn off. This card then hangs outside of the book itself and comes into prominence whenever the book is referred to.

Window
 Displays
 Pay Big
 Dividends
 Where
 the
 Contractor
 Is De-
 pendent
 Upon
 the General
 Public
 for His
 Custom.

"I have the one side and that costs me \$250 for the life of the directory and I get a constant circulation of some 25,000 or 30,000 directories. I know this type of advertising is read because I have it proved to me every day. It so happens that a local laundry has the other side of the card and many calls are received over my telephone that are for the laundry. My telephone number is nothing like theirs, so the origin of the call can be but one, the card. The laundry, I have learned, gets many of our calls, so you see that's how it works. I have an agreement with the telephone company that will permit me to have first choice on this card space as long as I want it. No one else can have it until I relinquish it.

"There are signs. I'm a great believer in signs. Wherever I do a

November 2, 1929

sheet metal, roofing or furnace job you'll find a cardboard sign. I saw one of my signs the other day that has been on the job for five years. That's a lot of advertising for the price of a little extra effort.

"I put a sign up on the lawn of a home where I was installing a heating plant. It has been five or six weeks since the job was completed. The sign is still there and will probably remain all winter.

"Of course you can readily see that when you are doing things like that you've got to be sure that your work is done right. To advertise poor work is worse than no advertising at all.

"One of my trucks has a metal house built on the back, with my name and business on the sides. It in no way interferes with the usefulness of the truck, while on the other hand, when the truck stands out on a job or travels through the streets, my name and service again is placed before the public.

"You say it costs lots of money! To be sure it does! But who ever made any money in any kind of business without spending it. Of course you can waste a lot of money in advertising, but if you examine our effort in that direction closely, you will find a well rounded policy that is pretty closely fitted to the needs of my business.

ROOFING SHEET METAL

and

CELOTEX Roofing Insulation

in the new

MODEL BUILDING

are Big Factors
in Making This One of Gary's
Finest Structures.

Roofing, Sheet Metal and
Insulation

by

CHARLES L. GATZ
804 WASHINGTON STREET

Phone 1120

Type of General Advertising Carried on at All Times by Mr. Gatz

"Last but not least of my advertising effort is my place of business. My windows and my display rooms are always kept neat and clean. This is just another phase of my entire plan of advertising. If I were to engage in all this advertising effort that I have outlined and then were to invite my prospective customers into a dirty, cluttered sales room, a great deal of the good effect built up by my other advertising would be discounted. People would lose confidence the moment they came into the store. I have my office in the rear purposely so as to allow greater display space.

"Another thing that I have discovered is this: In our line of busi-

ness no job, regardless how small or unimportant, is too small for us. Some time ago I thought I would endeavor to work into some of the larger warm air heating jobs. By so doing our smaller work dropped off considerably for lack of cultivation. It didn't take me very long to realize that this was a mistake and now I'm back after the small jobs, as well as the big ones. If the small business is worked right, it can be made to keep otherwise idle men profitably employed and comes in mighty handy.

All this continuous advertising and doing good work has built a reputation for the business and it is now thoroughly established. We have built up a regular clientele here, but if we were to stop our publicity effort, our business would dwindle away in spite of ourselves. And the reason: People soon forget things that are not continuously pushed before their attention and even if they did not, new people are constantly coming into the picture. These must be cultivated and made our customers. The man who says he is so well known about town that he does not need to advertise is bound to come to grief sooner or later. If not, he is advertising without knowing it. There is no such a thing as being so well known that you don't

(Continued on Page 26)

Gary District Indiana Sheet Metal Men Hold Dinner at Vogel's Fish Place, Hammond

A MEETING of the Gary district sheet metal contractors of the Indiana Sheet Metal Contractors' Association was held at Fred Vogel's Fish Place on the Sheffield Road near Hammond, Indiana, on the night of October 25. There were about 35 sheet metal contractors from Gary, Hammond and surrounding cities present. The meeting was held under the immediate direction of Chas. A. Gatz, Gary District Governor.

The affair opened with a dinner of fried chicken and fish, prepared as only Fred Vogel knows how to prepare it.

The dinner was followed by an informal meeting. In the absence of the state president, Frank Anderson, who found it impossible to get to the meeting, "Virg" Roland, vice-president, Elkhart, Indiana, presided. Mr. Roland explained the purpose of the district meetings and expressed the sentiment that so far the affairs have been very successful in making it possible for the Indiana sheet metal contractors to get together and become better acquainted with one another, and to build up an enthusiasm for constructive cooperative effort. He then called upon Paul Jordan, executive secretary of the organization, to reveal some of the plans for the coming year with regard to the convention, which will be held in Indianapolis in January.

According to Mr. Jordan, it is the intention of the convention committee to continue the exhibits at the convention, and an endeavor will be made this year to have a greater representation of sheet metal items and machines on display. The Denison Hotel will again be used because of the convenient proximity of the exhibit room to the assembly hall.

George Duerr, Editor of AMERICAN ARTISAN, explained the purpose of the Cleveland meeting of the warm air furnace manufacturers

with the Federal Trade Commission a week ago, pointing out the good effects that are bound to accrue to the entire warm air heating industry if the Federal Trade Commission ratifies the resolutions adopted.

Mr. Duerr also called attention to the fact that the steel mill representatives present at the Metal Branch meeting of the National Hardware Association gave every indication that they, too, would favor a Federal Trade Conference, with the formulation of a set of resolutions that will tend to correct the abusive trade practices which are now working to the detriment of the entire industry.

W. S. Waters, past president of the Indiana Sheet Metal and Warm Air Heating Contractors' Association, said this action was in line with what the Indiana association has been trying to bring about for a long time.

Good fellowship prevailed throughout the meeting, and a rising vote of thanks was given Fred Vogel for the very excellent dinner which he prepared for the delegates. A vote of thanks was also given Charles L. Gatz, chairman of the committee on arrangements and District Governor of the Gary district, for the fine way in which the affair was arranged.

SELLING AN INDUSTRY

(Concluded from Page 13)

vantage there is to you in using the electric truck in lieu of other types of truck. We think we have the best electric truck made, but if our truck does not appeal to you for any reason, there are ten or twelve other electric truck makers who turn out good products. These manufacturers' trucks are on display at the following addresses." Here he listed the name and address of the company and location where other trucks might be seen.

That is what I term selling an

industry to the public, as well as your own product. Did that advertiser of electric trucks lose any business by his ad? No, he did not. He gained. In the first place, he made prospective truck purchasers stop and think about the electric truck industry. He made them conscious of that industry. Once get them thinking about the electric truck industry and where do you suppose the majority of them would go to learn first hand the merit of an electric truck?

Our warm air furnace advertiser has done somewhat the same thing by boosting the warm air heating industry as much, if not a little more, than he boosts himself. That is the thought that we wish to implant in the minds of all the furnace manufacturers and the dealers as well. Sell the public on the bigger things—the industry as a whole. That done, your own sales resistance is going to be less.

Ryerson Acquires Business and Equipment of Penn-Jersey Steel Co.

Joseph T. Ryerson & Son, Inc., Chicago, have purchased the business, equipment and stock of the Penn-Jersey Steel Co. of Camden, New Jersey, effective November 16.

This firm carries on hand complete stocks of steel shapes, plates, sheets, hot and cold finished bars, reinforcing bars, etc. They serve all industry and construction trades in the Philadelphia district with prompt shipment from warehouse.

The Ryerson Company plan to add to the stock and increase the facilities in order to improve and extend the splendid service for which this company is known.

Unishear to Be Acquired by Stanley Works of New Britain, Connecticut.

Effective November 2, the Unishear Company, New York, will be taken over by Stanley Works of New Britain, Connecticut. No details as yet have been made public, but formal announcement will be made to the trade shortly.

WHO'S WHO, WHERE!

DETROIT, MICH.—The Industrial Sheet Metal Works, Inc., 1321 12th Street, has been chartered, with a capital stock of \$25,000.

PORT ANGELES, WASH.—G. D. Haugen has engaged in the sheet metal business here.

POMEROY, WASH.—Oren burt has purchased the tin shop and plumbing business belonging to the J. R. Stevenson estate.

PORTLAND, ORE.—The Piper Sheet Metal Works, 573 Morrison Street, has the sheet metal work contract for the county farm kitchen, near Troutdale, Ore.

BELLINGHAM, WASH.—The F. M. Hackell Plumbing Co. has been awarded the sheet metal contract for a business building of Puget Sound Power & Light Co.

HOQUIAM, WASH.—H. J. Pryde and D. E. Pryde have incorporated in the sheet metal and roofing business as Pryde Brothers, with a capital of \$25,000.

SEATTLE, WASH.—The Columbia Sheet Metal & Furnace Co. has been incorporated by L. E. Thompson, George Malgren and Mary Wyman, with a capital of \$15,000.

SUPERIOR, WIS.—Carlson Brothers, 1216 Banks Avenue, has the roofing and sheet metal work contract for the sanatorium in Hawthorne, Wis.

LA CROSSE, WIS.—John Ledegan has been awarded the sheet metal work, ventilating and insulating contract for Gunderson Clinic hospital building.

ABERDEEN, S. D.—The Aberdeen Sheet Metal Works has been awarded the roofing and sheet metal contract for Forbes Science Hall in Yankton, S. D.

BUTTE, MONT.—Arnold Brett, S. Main Street, has the warm air heating contract for the residence of N. P. Knutson.

DAVENPORT, IA.—The Round Oak Heating Co., 314 East 3rd Street, has the warm air heating contract for the residence of G. G. Petersen.

The Steinhaus Heating Co., 124 Harrison Street, has furnace heating contract for the residence of Harry Rathjen.

WATERLOO, IA.—The Waterloo Metal & Manufacturing Co., corner Commercial and Miles Streets, has heating contract for the residence of Peter C. Johnson.

The H. B. Fereday Sheet Metal Works, 527 Cottage Street, has the heating contract for the residence of Frank Bisdorf.

SAN FRANCISCO, CAL.—The Atlas Heating & Ventilating Co. has the sheet metal work contract for W. H. Brierly clubhouse.

PALO ALTO, CAL.—Christianson & Anderson have the sheet metal work contract for the residence of E. M. Manning.

SACRAMENTO, CAL.—Denphy & Davis, 3136 Folsom Blvd., have the sheet metal contract for addition to Sierra School.

NORTH SACRAMENTO, CAL.—B. R. Burgess has the sheet metal contract for addition to school building.

PASADENA, CAL.—The Payne Furnace Supply Co. has the heating contract for the residence of Sidney R. Francis.

The Califur Furnace Exchange, 350 S. Raymond Avenue, has been formed as a furnace manufacturers' association by Reliable Sheet Metal Works, 350 S. Raymond Avenue, Pasadena; Pasadena Sheet Metal Works, 57 W. Union, Pasadena; Jones Heating Co., 28 E. Union, Pasadena; Taylor Sheet Metal Works, 313 S. Fair Oaks Ave., Pasadena; Clough Unit

System of Heating, 821 N. Avenue 50, Los Angeles; Hughes Sheet Metal Works, 2651 Main St., Ocean Park; and Brengman Sheet Metal Works, 2222 Barry Ave., Sawtelle.

LOS ANGELES, CAL.—Herbert M. Rimlinger has engaged in business at 2849 Robertson Blvd., under the name of Service Sheet Metal Works.

WATERLOO, IA.—The L. E. Glaze Sheet Metal & Furnace Works, 811 Commercial Street, has the furnace heating contract for the Greek Orthodox Catholic Church.

LOUISVILLE, KY.—The plant of Ahlers & Gregoire, manufacturers of copper kettles and boilers, 621-23 E. Main Street, has been damaged by fire about \$10,000.

PALM BEACH, FLA.—Ahrens & Son have the sheet metal work for addition to the J. Leonard Repleglo home.

KOKOMO, IND.—The Kokomo Stamped Metal Co., toy manufacturers, have turned over the distribution of their products in West Virginia, Tennessee, Mississippi, Kentucky, Alabama, North Carolina, South Carolina, Georgia and Florida to the Faucett-Huston Co. of 1009 Chattanooga Bank Bldg., Chattanooga, Tenn.

SAN FRANCISCO, CAL.—Lowell Davison has moved his sheet metal works from 1670 San Jose to 375 Monterey Street.

SEATTLE, WASH.—The Hogaboom Heating & Ventilating Co. has been incorporated with a capital stock of \$10,000 by H. R. and M. Hogaboom.

LA CROSSE, WIS.—The Joseph Haag Roofing & Cornice Co., 135 East 12th Street, has been awarded the roofing contract for two depots for the C. B. & Q. R. R.

ABERDEEN, S. D.—Ell's Sheet Metal Co., 123 Third Avenue, S. W., has the roofing and sheet metal contract for a store building of Urban Mercantile Co., Hebron, N. D.

WATERTOWN, S. D.—The Rohde Roofing Co. has been awarded the roofing and sheet metal contract for an apartment building and garage in Miller, S. D., and also the roofing contract for a school building in Leola, S. D.

DAVENPORT, IA.—R. Claussen, 617 W. Second Street, has been awarded the warm air heating contract for residence of McInnis Brothers.

MINNEAPOLIS, MINN.—George T. Warner, 1406-8 Washington Avenue, S., has been appointed sales representative of the Moeschl-Edwards Corrugating Co., of Cincinnati, and will carry a line of Kalameim, tin clad and steel rolling doors there, so he can make prompt delivery in his territory.

LOS ANGELES, CAL.—The Crescent Sheet Metal Works has been awarded the contract for skylights for a mausoleum at Hollywood cemetery.

The Payne Furnace & Supply Co. has the warm air heating contract for the Kenneth Fether residence at Downey, Cal.

The Main Cornice Works has been awarded the sheet metal contract for an office building of Los Angeles & Phoenix Express Co.

LONG BEACH, CAL.—The Emil Brown Co. has the sheet metal contract for the hangar and quarters building at the Municipal airport.

WATERLOO, IA.—The H. B. Fereday Sheet Metal Works has been awarded the warm air heating contract for two

residences of Sam Scott and three residences of John J. Beck.

WICHITA, KAS.—The Western Sheet Metal Works, 450 N. Main St., has the roofing and sheet metal contract for the Edmund Stanley school.

Furnace Installers

Complain of Poor

Deliveries from Manufacturer

We received a rather unusual request the other day that made us stop and wonder whether the furnace manufacturers are doing everything they can to expedite shipments of repair parts for furnace.

Here's what the subscriber said in his letter:

"We believe that it would be a good thing for the trade in general if you could have an article in the ARTISAN at this time explaining a system for furnace manufacturers in handling repair business during the rush season.

"Our reason for this request is that an order for grate bars was sent to a furnace manufacturer on the fifth instant. And today, the fourteenth we received an order blank and a request to sign it and enclose a check to cover same.

"During the season 1926 and 1927, we purchased five carloads of furnaces from these people and paid for them as we agreed—so there is no question of credit. The way these people handle their repair business it will take about three weeks for a dealer to get the repairs during a season when immediate action is necessary.

"Trusting that you can do something to correct this evil, we are."

Delays of this kind right now are certainly costly to the furnace installer, and the manufacturer should so organize his affairs as to give the installer the quickest possible service on repairs. It is only by responding promptly to the requests for help from the customer that the installer can build good will, but if the manufacturer holds up the dealer's order for two or three weeks, it is very disappointing to the latter to say the least.

Perhaps in some cases the manufacturer is justified in seeking to

learn the credit rating of an installer before shipping the repairs to him, but it doesn't seem as though two or three weeks would be required for that purpose. If there is a question of credit, which there apparently was not in this case, it would seem that sending the goods C. O. D. would be preferable to making the installer wait. What he wants is the repair parts so that he in turn can give the customer heat.

Let's see if we can't be a little more sympathetic to the problems of the furnace installer. He has troubles enough without having delays in shipping added to his pack of worries. In these days of rapid transportation and economical telephone service there is little excuse for delays of a week, to say nothing of two or three. The progressive furnace manufacturers of today have so arranged their affairs that they have sufficiently definite knowledge of at least their own dealers' credit to permit them to ship or refuse to ship repairs promptly. That is as it should be. Other manufacturers had better look to their knitting.

G. E. Spates of Time-O-Stat Controls to Take Charge of Detroit Office

Time-O-Stat Controls Co., Elkhart, Ind., has appointed Gerald E. Spates to take charge of the Detroit office located at 4270 Second boulevard.

Mr. Spates, for the past three years, has been sales engineer at the factory. Carl A. Scholle, who recently was placed in charge of the New York office, will devote his entire time to the distributing organization, and will travel direct from the home offices.

Ray G. Schott has been appointed manager of the New York office located at 11 West 42nd Street. Recent appointments of new distributors are: Braid & Haberkorn, Inc., 940 Speer Boulevard, Denver, Colorado; J. H. Lynn, 724 McIntyre Building, Salt Lake City, Utah; Cline Co., 535 W. Main Street, Oklahoma City, Oklahoma; J. Sylvan Bowers, Heating Specialty Co., 3805

Page Boulevard, St. Louis, Missouri; Northwest Time-O-Stat Distributors, 2707 E. Lake Street, Minneapolis, Minnesota; American Appliance Co., 1214 Harvey Street, Omaha, Nebraska.

J. M. Oliphant Dies Following Heart Attack

His many friends will regret to learn of J. M. Oliphant's death, who passed away at his home in Indianapolis on Saturday, October 19, as the result of a stroke suffered over four months ago and from the effects of which he failed to recover, in spite of his determination to get well.

"Jack," as he was affectionately



J. M. Oliphant

known to countless acquaintances, especially dealers throughout the state of Indiana, where he had represented the Meyer Furnace Company for more than fifteen years, was acknowledged to be a salesman of the highest caliber, and he was for quality first, last and always. His work in promoting better methods in heating practice (even before the Standard Code, of which he was a staunch advocate) will live long after him, this also applying to other territories as well as Indiana, for he operated as one of his company's special promotional representatives in all parts of the country—in fact, it was while on one of these special

missions in the East that he was stricken at Bridgeport, Connecticut.

Second only to his devotion to his family was his loyalty to his company and his whole-hearted interest in warm air heating, and his untimely departure will be felt as a distinct loss.

Rudy Furnace Co. Has Gas-Fired Unit Soon to Be in Regular Production

The Rudy Furnace Company, Dowagiac, Michigan, under the direction of Tom Torr, is entering the production of a gas-fired warm air furnace.

One of the new gas-fired Rudy units is now on display in the sales room of the Standard Sheet Metal Works, 243 West Portage Street, Kalamazoo, Michigan.

The unit is made in sections, so that it can be made into any size to meet requirements. It is attractively colored, thermostatically controlled and in every way a scientifically correct heating unit.



"Heat Hustler"

From Real Roofers and Sheet Metal Workers, Inc., 84-86 Third Street, Gloversville, New York.

Can you tell us who manufactures the "Heat Hustler"?

Ans.—American Foundry and Furnace Company, Bloomington, Illinois.

Wet and Dry Bulb Thermometer
From A. Conzelman, Streator, Illinois.

Please tell me who makes a wet and dry thermometer for estimating the humidity of a home.

Ans.—E. Vernon Hill Company, 64 West Randolph Street, Chicago.

Repairs for "Simplex" Furnace
From D. J. Hourez, Buffalo, Illinois.

Kindly let me know if it is possible to get a radiator for a "Simplex" furnace, made by the Simplex Furnace Company of Racine, Wisconsin, now out of business. Is some other firm making this furnace now?

Ans.—Northwestern Stove Repair Company, 654 West Roosevelt

Road, Chicago, can furnish such a radiator. As far as we know, the "Simplex" furnace is not being manufactured at this time.

Address of National Association of Sheet Metal Contractors

From Acme Steel Company, 2840 Archer Avenue, Chicago.

Can you tell us where the National Association of Sheet Metal Contractors is located?

Ans.—336 Fourth Avenue, Pittsburgh, Pennsylvania.

Repairs for "Pacific Renown" Range

From Clark Hardware Company, Windom, Minnesota.

Please tell us who manufactures the "Pacific Renown" steel range No. 8-18 B, as we want repairs for it.

Ans.—The Independent Stove Company, Owosso, Michigan.

Glass Letters for Electric Signs

From Frank E. Wilk, P. O. Box 402, Syracuse, Nebraska.

Where can I get glass letters for electric signs?

Ans.—Chicago Miniature Lamp Works, 654 West Lake Street, and Opalite Sign Company, Inc., 201 East Ohio Street; both of Chicago.

Umbrella Covers

From Louis I. Drackert, Tipton, Missouri.

Kindly tell me who sells umbrella covers.

Ans.—Kreis & Hubbard, 320 South Franklin Street, and American Waterproof Products Company, 724 West Roosevelt Road; both of Chicago, Illinois.

"Shurflow" Oil Cups

From F. E. Grunwaldt, 164 Gales, Seattle, Washington.

Can you tell me who makes "Shurflow" wick feed oil cups?

Ans.—Hunter Pressed Steel Company, Lansdale, Pennsylvania.

THE GATZ WAY

(Concluded from Page 22)... have to advertise in some way."

After this discourse on advertising a sheet metal business, I put this question to Mr. Gatz: "Mr. Gatz, after having had thirty years of business experience in the sheet metal and warm air heating industry, if you were going to enter business again, what, if anything, would you do differently?"

Without a moment's hesitation he

CHAS. L. GATZ
FURNACES—ROOFING—SHEET METAL
804 Washington St.

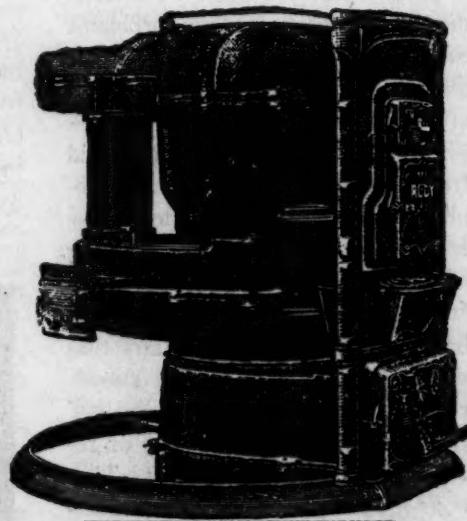
FURNACES
RUDY — FRONT RANK — ROBINSON

**HOME
BUILDERS**

In planning the installing of a new furnace we can save you money. Furnaces installed according to standard code.

Workmanship guaranteed.

Estimates gladly given. No obligation on your part.



THE RUDY DIVING FLUE FURNACE

Furnace Ad Used by Mr. Gatz

replied: "I would try to be more careful about the work I contracted to do. I wouldn't try to grab all of it that came my way, even though I was very anxious to make a go of my business. I would endeavor to take work only that would net me a fair profit. I firmly believe that if I were to follow such a policy as that from the outset, many of the pitfalls in the ordinary pathway of business would be unknown to me. It is the young man's greed and impatience to "hog" all the business that makes him careless and negligent about endeavoring to learn whether the owner or contractor who has asked him to bid is financially responsible. There isn't much satisfaction in completing a job in workmanlike manner only to be "skinned" out of your money in the end. But that is exactly what happens in entirely too many cases."

Mr. Gatz does all kinds of sheet metal and roofing work. He also installs furnaces and oil burners, distributing the Ben Franklin oil burn-

er, Robinson, Ruddy, Gem and Quaker furnaces. He also sells toboggans, Armco and Toncan metal.



National Warm Air Heating Association, Columbus, Ohio, December 3 and 4, 1929. Allen Williams, 174 East Long Avenue, Columbus, Managing Director.

Kentucky Hardware and Implement Association Convention, Brown Hotel, Louisville, January 14, 15, 16 and 17, 1930. J. M. Stone, Secretary, 200 Republic Building, Louisville.

Texas Hardware and Implement Association Convention and Exhibition, Houston, January 21, 22 and 23, 1930.

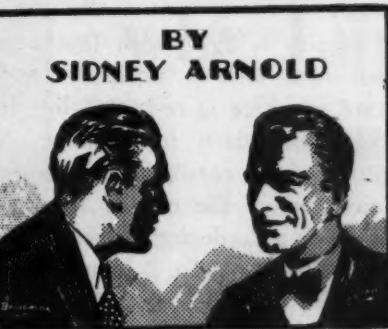
American Society of Heating & Ventilating Engineers and International Heating and Ventilating Exposition, Philadelphia, January 27 to 31, 1930. A. V. Hutchison, 29 West 39th Street, New York, Secretary.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6 and 7, 1930. B. Christianson, Secretary, Stevens Point. G. W. Kornely, Exhibit Manager, 1476 Green Bay Ave., Milwaukee.

RANDOM NOTES AND SKETCHES

Here is first hand evidence that Charlie Gatz, sheet metal contractor of Gary, Indiana, is a first-class fisherman. Many of the Indiana boys thought Charlie was spoofing them when he led them to believe that he could fish, but he certainly proved to their entire satisfaction that if he himself can't fish, he travels with a bunch of men who know what's what in game fishing.

Anybody who knows Vogel's Fish Place on the outskirts of Hammond, Indiana (Fred Vogel is Charlie's friend), and knows the excellent fish dinners served there also knows that



J. A. Brandt, instructor in sheet metal at Mooseheart, Illinois, thinks that I need the house for sale (referred to on page 112, October 19 issue), in Aurora, Illinois, worse



Here They Are—Charles Gatz and His Cronies with the Big Catch. Mr. Gatz Is on the Extreme Right

Charlie Gatz and the rest of his cronies know fish, where to catch them and how to prepare them for the table.

The accompanying illustration is that of a mess of fish caught by Charlie Gatz and two of his friends at Art White's resort, Haywood, Wisconsin. The man at the right is Charlie Gatz; seated, Art White himself, and at the left, J. W. Stetssie.

than he does. Here's what he says: "Any location that will produce an increase like that noted should appeal to you. Why not move out and try it? I know of no one that is more in need of assistance." For details see page 112 of the October 19 issue AMERICAN ARTISAN.



Mrs. F. E. Wilkening: "Golf, golf, golf. I really believe that if you spent a Sunday at home I should die."

Mr. Wilkening, Standard Metal Co., Indianapolis: "It's no use talking like that, my dear; you can't bribe me."

* * *

Both Sheet Metal Men

Smith: "Would you—er—advise me to—er—marry a beautiful girl or a sensible girl?"

Brown: "I'm afraid you'll never be able to marry either, old man."

Smith: "Why not?"

Brown: "Well, a beautiful girl could do better, and a sensible girl would know better."

* * *

I had a visit from Jack Stowell the other day. It seems that Jack had just returned from Cleveland or some other remote place. He stated that it was the first time he had been home for a quite a long time. I asked him how his new wife liked that. And he said: "Boy, I trained her right in the first place. When I come home to dinner she celebrates by killing the fatted calf." Gosh, how these benedicts like to boast about how they stay away from home any night they feel like it and no questions asked. Big, dominant he men they are. I'm laughing. I wonder when the training course will begin?

* * *

Wanted Regular Service

Wm. U. Metzger, sheet metal contractor at 144 North Edwards Street, Kalamazoo, Michigan, walked into a railroad office in Kalamazoo and asked for a ticket to New York.

"Do you wish to go by Buffalo?" asked the ticket agent.

"Certainly not!" Bill replied. "By train, if you please!"

Will Stock Market Drop Hit Steel?

Industry Scans Situation, with Eye on Public Buying Power—Some Lines Under Price Pressure—Current Buying and Production Tapering

INTEREST in the current market for iron and steel has been subordinate the past few days to appraisal of the effect which the debacle in security values may have upon the iron and steel industry.

Thus far there has been no repercussion, and since the industry lacks a broad, direct contact with the public, any reaction will be of a secondary nature, but there is no doubt steel will be sensitive to any general contraction in buying power for the time being.

Of the major consumers of steel, the automotive industry appears most exposed to the shock of stock market losses, with the burden heaviest on the luxury cars.

With auto production now at bedrock, the immediate effect would more likely be deferment of resumption rather than further curtailment.

Track material programs of the railroads are so largely replacement that exterior conditions must pursue a devious route before effecting maintenance.

A large proportion of 1930 material already has been ordered. Carbuilders have sufficient business on their books to carry them through the year, though action on pending inquiry may be retarded somewhat.

Farm implement manufacturers appear least likely to be affected. Building is entering what is normally an off season, but fabricators in the East have rarely been so well booked. Shipbuilders are embarked upon the best programs since the war.

Iron and steel producers naturally are uneasy over the psychological effect of the shakeout and the certain consequent shrinkage in buying power.

Pig Iron

Activity in the Pittsburgh pig iron market shows further decline. Large orders are lacking and small pur-

chases are less plentiful than recently.

Inquiry is light, with few large individual lots in prospect. Forward coverage is restricted by the ease with which iron can be obtained, and possibility of lower prices before the end of the year has been a deadening influence.

Small lots of No. 2 foundry iron still are \$18.50, base, valley, with bessemer and malleable \$19. Basic is nominal at \$18.50.

Northern pig iron quotations remain steady at \$20, base, Chicago furnace. Interest in the market is centered chiefly in spot fill-in tonnages.

October shipments are slightly ahead of the September rate. A local steel works interest has released 2,000 to 3,000 tons for merchant orders.

Small sales of pig iron are numerous at Birmingham, but the aggregate is not large. Shipments continue active, steadily reducing surplus stock.

Prices for the remainder of the year are \$14 to \$14.50, base, furnace, for local delivery, and \$1 less for competitive sections. The price base for first quarter will be \$15 to \$15.50.

Non-Ferrous Metals

Copper is the only non-ferrous metal which has held at unchanged price levels this week. Lead was quoted down sharply 15 points in the New York market and 20 points, East St. Louis basis, on Tuesday. Zinc declined 10 points, while tin prices continued weak under the influence of soft prices in London. Antimony prices displayed some strength on Monday, but again were easy in a dull market on Tuesday, it was reported.

Copper

Domestic demand has been very light this week and export sales have lagged. Some buying has been done every day for shipment abroad,

which had a steady effect.

Producers apparently are firm in their price positions, despite nervousness caused by the stock market among both buyers and sellers. Domestic consumers have been covered on their November requirements for some time.

A little more buying is expected for next month, however. Earlier reports of price shading in the outside market disappeared entirely the fore part of this week and did not return.

Zinc

Some sellers of prime western metal lowered their prices to 6.60c, East St. Louis, late Monday. By Tuesday this lower quotation became general in the market and light trading was done at this figure during the week.

High grade zinc held unchanged at 8c delivered East, while brass special was quoted 6.70c, East St. Louis. Rumors of price shading previous to the decline have been heard.

Lead

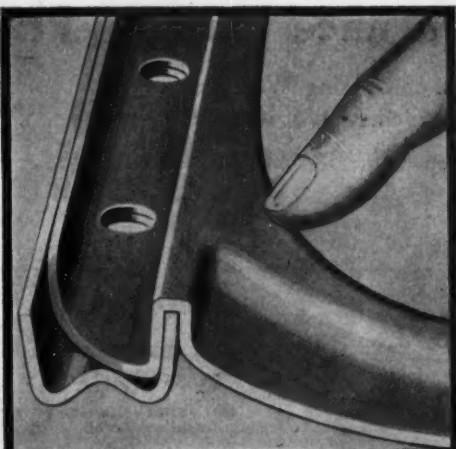
A drop in London prices preceded a decline of 15 points in the American Smelting & Refining Co.'s contract price on Tuesday which affected prices generally.

On the East St. Louis basis, lead immediately was quoted at 6.50c. Although some business had been done daily previous to the cut in prices, sales lagged after sellers had lowered their quotations. Weakness in London and fall in stock prices here were large factors in the decline.

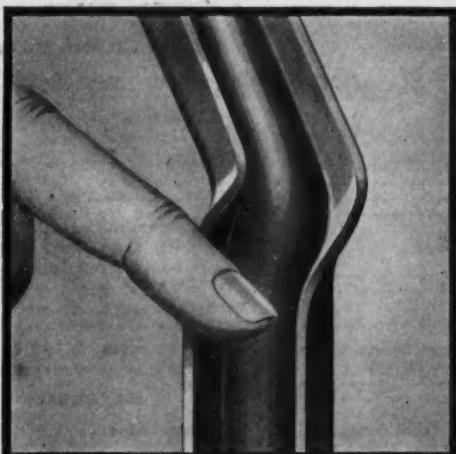
Tin

The market here has been very quiet this week, with both buyers and sellers watching the trend in London and the securities situation in this country.

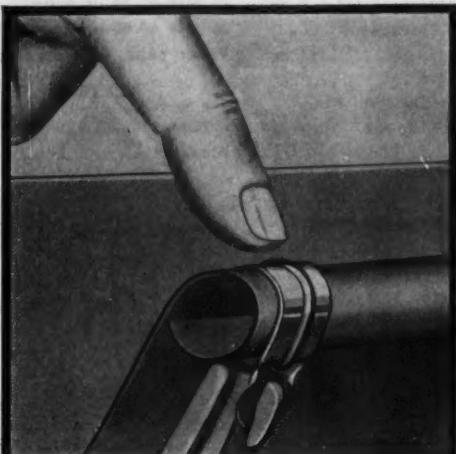
Fluctuations in tin prices of late have been wide and buyers have hesitated to enter the market for that reason preferring to wait until the situation cleared more.



Note how circle locks on shank. If the bolt should work loose through vibration, the weight of the gutter would still be on the shank.



Double-channeled construction at bend (shown in middle picture) gives 50% more strength than any other type of No. 12 shank, yet permits bending to meet roof pitch.



The rust-proofed coated bead clip rolls easily over the gutter bead and holds absolutely firm without solder.

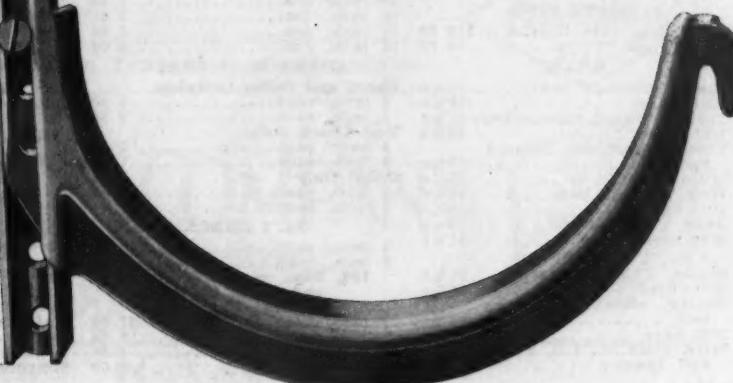
The pictures tell why Lupton Hangers are best

WINTER BLIZZARD or a summer thunderstorm, Lupton Hangers carry the load without strain. Because they're built on scientific principles of engineering. Strength is put where it will do the most good.

Study the three diagrams at the left. They emphasize the superior features of Lupton Hangers. The positive lock of circle on shank. The double-channeled band. The rust-proofed coated bead clip, that can be put on without solder and saves time. It reduces the replacements made necessary by rust.

The Lupton Hanger can be obtained in any of the metals regularly used for roofing accessories. Its quality is worthy of the LUPTON name. It will stand any test you wish. Examine the Lupton Hanger at your jobber's. Or write us for a sample. David Lupton's Sons Co., Allegheny Ave. and Tulip St., Philadelphia.

LUPTON HANGERS



Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

Note: These Prices Are Chicago
Warehouse Prices of Metal, to
Which Must Be Added Freight
to Cities Outside of Chicago.

METALS

PIG IRON

Chicago Fdy.,	
No. 2	\$20.00
Southern Fdy. No. 2	21.51
Lake Superior Charcoal	27.04
Malleable	30.00

FIRST QUALITY BRIGHT CHARCOAL TIN PLATES

IC	20x28 112 sheets	\$22.50
IX	20x28	28.50
IXX	20x28 56 sheets	14.50
IXXX	20x28	15.50
IXXXX	20x28	17.50

TERNE PLATES

IC	20x28, 40-lb. 112 sheets	\$26.70
IX	20x28, 40-lb. 112 sheets	29.70
IC	20x28, 25-lb. 112 sheets	22.20
IX	20x28, 25-lb. 112 sheets	25.20
IC	20x28, 20-lb. 112 sheets	20.20
IV	20x28, 20-lb. 112 sheets	22.00

"ARMCO" INGOT IRON PLATES

No. 8 ga.—100 lbs.	..... \$4.15
4/16 in.—100 lbs.	..... 4.05
1/4 in.—100 lbs.	..... 3.85

COKE PLATES

Cokes, 50 lbs., base, 20x28	\$12.00
Cokes, 50 lbs., base, 30x28	12.20
Cokes, 100 lbs., base, 20x28	12.40
Cokes, 107 lbs., base, IC 20x28	12.75
Cokes, 155 lbs., base, IX 20x28	14.75

COKES

Cokes, 155 lbs., base, IX, 56 sheets	8.50
Cokes, 175 lbs., base IX, 56 sheets	9.25
Cokes, 195 lbs., base 4X, 56 sheets	10.25
BALM ANNEALED SHEETS	
Base 10 ga.—per 100 lbs.	\$2.25

"ARMCO" 10 ga.—per 100 lbs.

ONE PASS COLD ROLLED BLACK

No. 18-20	..... per 100 lbs. \$2.25
No. 22	..... per 100 lbs. 4.00
No. 24	..... per 100 lbs. 4.05
No. 26	..... per 100 lbs. 4.15
No. 27	..... per 100 lbs. 4.20
No. 28	..... per 100 lbs. 4.30
No. 29	..... per 100 lbs. 4.45
No. 30	..... per 100 lbs. 4.55

"ARMCO" GALVANIZED

"Armco"	24—per 100 lbs. 36.18
---------	-----------------------

GALVANIZED

No. 16	..... per 100 lbs. \$4.40
No. 18	..... per 100 lbs. 4.55
No. 20	..... per 100 lbs. 4.70
No. 22	..... per 100 lbs. 4.75
No. 24	..... per 100 lbs. 4.90
No. 26	..... per 100 lbs. 5.15
No. 27	..... per 100 lbs. 5.25
No. 28	..... per 100 lbs. 5.40
No. 30	..... per 100 lbs. 5.50

BAR SOLDER

Warranted 50-50 per 100 lbs.	\$31.00
48-52	..... per 100 lbs. 30.00
45-55	..... per 100 lbs. 27.50
Plumber's	..... per 100 lbs. 26.00

ZINC

In Slabs \$7.25
----------	--------------

SHEET ZINC

Cask Lots (600 lbs.)	..... \$12.00
Sheet Lots	..... 14.00

BRASS

Sheets, Chicago base	24 1/4 c
Mill base	23 3/4 c
Tubing, brazed, Chicago base	31 1/4 c
Mill base	30 3/4 c
Tubing, seamless, Chicago base	29 1/4 c
Mill base	28 3/4 c
Wire, Chicago base	24 1/4 c
Mill base	23 3/4 c
Rods, Chicago base	22 1/4 c
Mill base	21 3/4 c

COPPER

Sheets, Chicago base	27 1/4 c
Mill base	26 3/4 c
Tubing, seamless, Chicago base	30 1/4 c
Mill base	29 3/4 c
Wire, plain rd., 8 B & S. Go.	29 3/4 c
and heavier	25 1/4 c

LEAD

American Pig	..... \$7.60
Bar	..... 8.60

TIN

Bar Tin	..... per 100 lbs. \$47.00
Pig Tin	..... per 100 lbs. 46.00

ADAMS' SHEET METAL

LEADS

7 inch, doz.	..... \$1.60
8 inch, doz.	..... 2.20
9 inch, doz.	..... 2.60
10 inch, doz.	..... 2.80
12 inch, doz.	..... 3.50
14 inch, doz.	..... 5.00

EAVES TROUGH

Galv. Crimpedge, crated	..... 75-10%
Zinc, "Barnes"	..... 60%

ELBOWS

Conductor Pipe	
Galv. plain or corrugated, round flat Crimp,	
28 Gauge	..... 60%
26 Gauge	..... 45%
24 Gauge	..... 15%

BRUSHES

Furnace Pipe Cleaning	
Bristle with handle each	..... \$0.75
Flue Cleaning	
Steel only, each	..... 1.25

CEMENT, FURNACE

American Seal, 10-lb. cans, net	..... \$4.45
American Seal, 25-lb. cans, net	..... 8.85
Pecora	..... per 100 lbs. 7.50

CHIMNEY TOPS

Adams' Revolving	
Wt. Doz. Price Doz.	
4 in.	..... 21 lbs. \$11.00
5 in.	..... 24 lbs. 11.60
7 in.	..... 38 lbs. 13.50
8 in.	..... 51 lbs. 15.00
10 in.	..... 56 lbs. 18.00
12 in.	..... 66 lbs. 22.00
14 in.	..... 110 lbs. 36.00

CLINKER TONGS

Each \$1.50
------	--------------

CLIPS

Damper	
No-Rivet Steel, with tail pieces, per gross	..... \$9.50
Rivet Steel, with tail pieces, per gross	..... 7.50
Tail pieces, per gross	..... 3.40

COPPERS—Soldering Pointed Roofing

2 lb. and heavier	..... per lb. 40¢
2 1/2 lb.	..... per lb. 45¢
3 lb.	..... per lb. 48¢
1 1/4 lb.	..... per lb. 55¢
1 lb.	..... per lb. 60¢

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6 B.	..... Net

CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge	..... 30¢
28 gauge	..... 35¢

DAMPERS

Yankee Hot Air	
7 Inch, doz.	..... \$1.60
8 Inch, doz.	..... 2.20
9 Inch, do	

Keeping pace with the modern demand, INLAND GALVANIZED *CopperAlloy* STEEL SHEETS are affording a double protection to the complicated equipment of this newest industry.

Airport, Sheboygan, Wis., covered with INLAND *CopperAlloy* GALVANIZED STEEL SHEETS. (Below)



Dirigible Hangar, Grosse Ile, Mich., covered with INLAND *CopperAlloy* GALVANIZED STEEL SHEETS. (Left)

Hangar, Wichita Falls, Texas, covered with INLAND *CopperAlloy* GALVANIZED STEEL SHEETS. (Below)

INLAND *Copper Alloy* STEEL SHEETS

Strength and safety, combined with the enduring quality of INLAND *CopperAlloy* STEEL SHEETS, have nominated them for important service in this lusty young giant of American industry. Among the scores of buildings in field of aviation which are covered with Inland sheets are the two airports and the dirigible hangar shown above, situated in three different states. They are finding the protection they require in these splendid sheets—and the years will show the further advantage of a rust-resisting, permanent covering.

Other characteristics and many other uses are described in our new booklet. Write for your copy.

Contributing Member Sheet Steel Trade Extension Committee.



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38 South Dearborn Street
Chicago



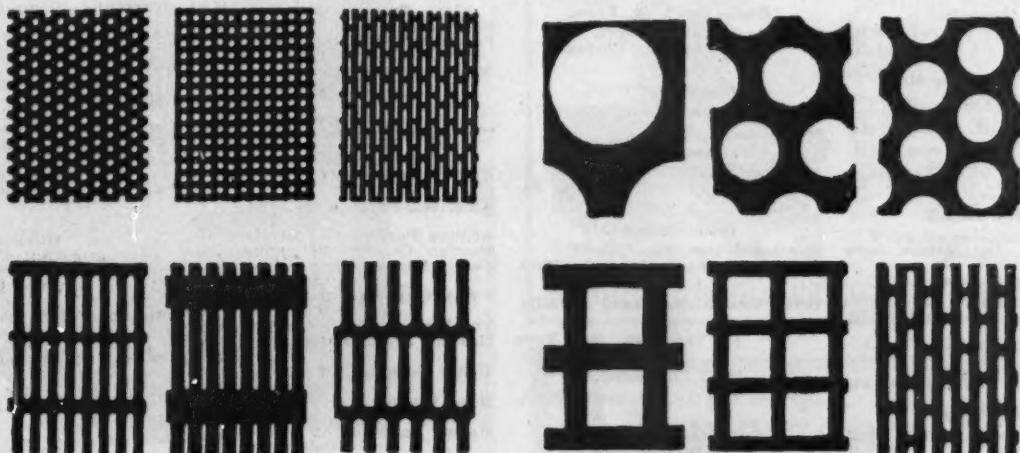
SHEETS BARS PLATES SHAPES RAILS TRACK ACCESSORIES RIVETS BILLETS

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Agricola Furnace Co. 39			100-lb. barrel 7.50	b'dld 75-15-5%
Alamo Heater Co. 9			50-lb. pail 4.25	Galv., Plain Ridge Roll
American Brass Co.			10-lb. bag 1.00	crated 75-15-
American Fdy. & Furnace Co.			5-lb. bag 55	
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Wise Furnace Co. 9				
PASTE				
Asbestos Dry Paste:				
200-lb. barrel \$14.00				
100-lb. barrel 7.50				
50-lb. pail 4.25				
10-lb. bag 1.00				
5-lb. bag 55				
2½-lb. cartons 25				
RIDGE ROLL				
Galv., Plain Ridge Roll, b'dld 75-15-5%				
Galv., Plain Ridge Roll, crated 75-15-				
SCREWS				
Sheet Metal				
Each 30.75			7. ¼x1¼, per gross \$0.55	
			No. 10. ¾x2½, per gross 88	
			No. 14. ¾x3¼, per gross 88	
POKERS, FURNACE				
Each 30.75				
POKERS, STOVE				
Nickel Plated, coll handles, per doz. 1.10				
Wr't Steel, str't or bent, per doz. 30.75				
PIPE				
Conductor				
Cor. Rd., Plain Rd., or Sq.				
Galvanized				
Crated and nested (all gauges) 50 & 10%				
Crated and not nested (all gauges) 75-7½%				
PIRE				
Double Wall Pipe and Fittings 50 & 10%				
Single Wall Pipe, Round Galvanized Pipe 50 & 10%				
Galvanized and Tin Fittings 50 & 10%				
Furnace Pipe				
Double Wall Pipe and Fittings 50 & 10%				
Single Wall Pipe, Round Galvanized Pipe 50 & 10%				
Galvanized and Tin Fittings 50 & 10%				
SHIELDS, ADJUSTABLE RADIATOR				
No. 1 "Gem" 11" to 17" 30%				
No. 2 "Gem" 14" to 24" 30%				
No. 8 "Gem" 35" to 65" 30%				
SHOES				
Galv. 28 Gauge, Plain Ridge Roll, 14x14. 30%				
Galv. 28 Gauge, Plain Ridge Roll, 14x14. 30%				
Galv. 28 Gauge, Plain Ridge Roll, 14x14. 30%				
SNIPS, TINNERS				
Clover Leaf 40 & 10%				
National 40 & 10%				
Star 50%				
Milcor Net				
SQUARES				
Furnace Tackle per doz. \$0.85				
Furnace Screw (enamelled) per doz. 75				
PULLEYS				
Furnace Tackle per doz. \$0.85				
Furnace Screw (enamelled) per doz. 75				
PUTTY				
Commercial Putty, 100-lb. Kits \$3.15				
QUADRANTS				
Malleable Iron Damper 10%				
REDUCERS—Oval Stove Pipe				
Per Doz. 7—6, 28-gauge, 1 doz. in carton \$2.00				
REGISTERS AND BORDERS				
Baseboard, Floor and Wall				

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- Special Brakes and Presses



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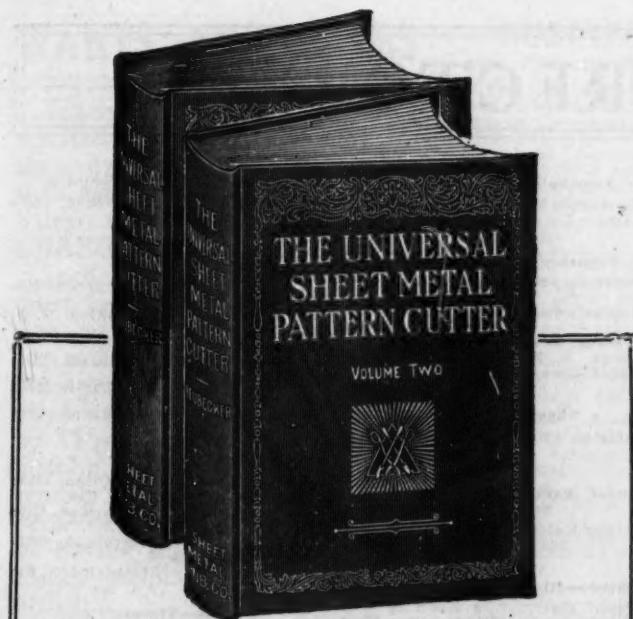
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Meyer & Bro. Co., F., Peoria, Ill. Watt Mfg. Co., Sterling, Ill.	La Salle Machine Works, Chicago, Ill.	Eller Mfg. Co., Canton, Ohio Forest City-Walworth Run Foundries Co., Cleveland, Ohio Milwaukee Corrugating Co., Milwaukee, Wis.	Alamo Heater Co., Chicago, Ill. Standard Fdy. & Furnace Co., De Kalb, Ill.
Air Conditioning Machines.	Diffuser—Air Duct.	Furnace Switch—Automatic.	Heaters—School Room.
Heating Systems Corp., Watt Mfg. Co., Joliet, Ill.	Aeolus-Dickinson Co., Chicago, Ill.	The Mercold Corp., Chicago, Ill.	Meyer Furnace Co., The, Peoria, Ill.
Asbestos Paper.	Doors—Metal.	Furnaces—Warm Air.	Waterman-Waterbury Co., Minneapolis, Minn.
Sail-Mountain Co., Chicago, Ill.	Lupton's Sons Co., David, Philadelphia, Pa.	Agricola Furnace Co., Gadsden, Ala.	Hotels.
Asbestos Liquid.	Drills—Electric.	American Furnace Co., St. Louis, Mo.	Fort Shelby Hotel, Detroit, Mich.
B. & F. Mfg. Co., Des Moines, Iowa	Ryerson & Son, Inc., Jas. T., Chgo., N. Y., St. L., Det., Cleve.	Brillion Furnace Co., Brillion, Wis. Emrich Co., C., Columbus, Ohio Farris Furnace Co., Springfield, Ill.	Humidifiers.
Benches—Steel.	Drive Screws—Hardened Metallic.	Forest City-Walworth Run Fdy., Cleveland, Ohio	Automatic Humidifier Co., Cedar Falls, Iowa
Maplewood Machinery Co., Chicago, Ill.	Parker-Kalon Corp., 200 Varick St., New York	Fox Furnace Co., Elyria, Ohio Heating Systems Corp., Joliet, Ill.	Diener Mfg. Co., G. W., Chicago, Ill.
Blast Gates	Dust Eliminator.	Henry Furnace & Fdy. Co., Cleveland, Ohio	Meyer & Bro. Co., F., Peoria, Ill.
Berger Bros. Co., Philadelphia, Pa.	Dustless Ash Co., Muskegon, Mich.	Hess Warming & Ventilating Co., Chicago, Ill.	Mueller Furnace Co., L. J., Milwaukee, Wis.
Blowers—Furnace.	Eaves Trough.	Homer Furnace Co., Coldwater, Mich.	Perfect Humidifier Co., St. Louis, Mo.
Lakeside Co., Hermansville, Mich.	Barnes Metal Products Co., Chicago, Ill.	Langenberg Mfg. Co., St. Louis, Mo.	J. L. Skuttle Mfg. Co., Dowagiac, Mich.
Bolts—Stove.	Berger Bros. Co., Philadelphia, Pa.	Lennox Furnace Co., Marshalltown, Ia.; Syracuse, N. Y.	Watt Mfg. Co., Sterling, Ill.
The Kirk-Latty Co., Cleveland, Ohio	Eller Mfg. Co., Canton, Ohio	Marshall Furnace Co., Marshall, Mich.	Lath—Expanding Metal.
Lamson & Sessions Co., Cleveland, Ohio	Lupton's Sons Co., David, Philadelphia, Pa.	Majestic Co., Huntington, Ind.	Eller Mfg. Co., Canton, Ohio
Ryerson & Son, Inc., Jas. T., Chgo., N. Y., St. L., Det., Cleve.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	May Flebeger Furnace Co., Newark, Ohio	Mill, Chgo., La Crosse, Kan. City
Brakes—Bending.	New Jersey Zinc Sales Co., The, New York, N. Y.	Meyer Furnace Co., The, Peoria, Ill.	Machines—Crimping.
Dreis & Krump Mfg. Co., Chicago, Ill.	Rockford Sheet Steel Co., Rockford, Ill.	Midland Furnace Co., Columbus, Ohio	Bartsch & Co., Cambridge City, Ind.
Ryerson & Son, Inc., Jas. T., Chgo., N. Y., St. L., Det., Cleve.	Elbows and Shoes—Conductor.	Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.	Machinery—Culvert.
Brakes—Cornice.	Barnes Metal Products Co., Chicago, Ill.	Mueller Furnace Co., L. J., Milwaukee, Wis.	Bartsch & Co., Cambridge City, Ind.
Dreis & Krump Mfg. Co., Chicago, Ill.	Dieckmann Co., Ferdinand, Cincinnati, Ohio	Premier Warm Air Heater Co., Dowagiac, Mich.	Machines—Tinsmith's.
Brass and Copper.	Eller Mfg. Co., Canton, Ohio	Richardson & Boynton Co., New York, N. Y.	Bartsch & Co., Cambridge City, Ind.
American Brass Co., Waterbury, Conn.	Lupton's Sons Co., David, Philadelphia, Pa.	Robinson Co., A. H., Massillon, Ohio	Machines—Tinsmith's.
Cans—Garbage.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Standard Fdy. & Furnace Co., De Kalb, Ill.	Bartsch & Co., Cambridge City, Ind.
Diener Mfg. Co., G. W., Chicago, Ill.	Rockford Sheet Steel Co., Rockford, Ill.	Success Heater Mfg. Co., Des Moines, Ia.	Miters.
Osborn Co., The J. M. & L. A., Cleveland, Ohio	Fittings—Conductor.	XXth Century Heating & Ventilating Co., Akron, Ohio	Eller Mfg. Co., Canton, Ohio
Castings—Malleable.	Barnes Metal Products Co., Chicago, Ill.	Waterman-Waterbury Co., Minneapolis, Minn.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City
Fanner Mfg. Co., Cleveland, Ohio	Eller Mfg. Co., Canton, Ohio	Western Steel Products Co., Duluth, Minn.	Osborn Co., The J. M. & L. A., Cleveland, Ohio
Ceilings—Metal.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Williamson Heater Co., Cincinnati, Ohio	Ryerson & Son, Inc., Jas. T., Chgo., N. Y., St. L., Det., Cleve.
Eller Manufacturing Co., Canton, Ohio	Mil., Chgo., La Crosse, Kan. City	Wise Furnace Co., Akron, Ohio	Hyro Mfg. Co., New York, N. Y.
Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Furnace Cement—Asbestos.	Glass—Wire.	Metals—Perforated.
Chaplets.	Connors Paint Mfg. Co., Wm., Troy, N. Y.	Lupton's Sons Co., David, Philadelphia, Pa.	Harrington & King Perforating Co., Chicago, Ill.
Fanner Mfg. Co., Cleveland, Ohio	Eller Mfg. Co., Canton, Ohio	Grilles.	Miters—Eaves Trough.
Chimney Tops.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Auer Register Co., Cleveland, Ohio	Barnes Metal Products Co., Chicago, Ill.
Standard Ventilator Co., Lewisburg, Pa.	Mil., Chgo., La Crosse, Kan. City	Harrington & King Perforating Co., Chicago, Ill.	Berger Bros. Co., Philadelphia, Pa.
Cleaners—Vacuum.	Furnace Cement—Liquid.	Hart & Cooley Co., New Britain, Conn.	Eller Mfg. Co., Canton, Ohio
Brillion Furnace Co., Brillion, Wis.	Technical Products Co., Pittsburgh, Pa.	Independent Register & Mfg. Co., Cleveland, Ohio	Lupton's Sons Co., David, Philadelphia, Pa.
National Super Service Co., Toledo, Ohio	Furnace Cleaners—Hand.	Tuttle & Bailey Mfg. Co., Chicago, Ill.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City
Williamson Heater Co., Cincinnati, Ohio	J. L. Skuttle Mfg. Co., Dowagiac, Mich.	Grilles—Steve Front.	Nails—Hardened Masonry.
Copper.	Furnace Controls.	Tuttle & Bailey Mfg. Co., Chicago, Ill.	Parker-Kalon Corp., New York, N. Y.
American Brass Co., Waterbury, Conn.	The Mercold Corp., Chicago, Ill.	Handles—Boller	Nails—Lead Head.
Rockford Sheet Steel Co., Rockford, Ill.	Furnace Cleaners—Suction.	Berger Bros. Co., Philadelphia, Pa.	Deniston Co., Not Inc., Chicago, Ill.
Cornices.	Brillion Furnace Co., Brillion, Wis.	Handles—Soldering Iron.	Oll Burners.
Eller Manufacturing Co., Canton, Ohio	National Super Service Co., Toledo, Ohio	Hyro Mfg. Co., New York, N. Y.	McIlvaine Burner Corp., Evanson, Ill.
Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Williamson Heater Co., Cincinnati, Ohio	Hangers—Eaves Trough.	E. L. Miller Mfg. Co., Kansas City, Mo.
Cut-offs—Rain Water.	Furnace Fans.	Berger Bros. Co., Philadelphia, Pa.	Ornaments—Sheet Metal.
Eller Mfg. Co., Canton, Ohio	A-C Mfg. Co., Pontiac, Ill.	Eller Mfg. Co., Canton, Ohio	Eller Mfg. Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Brundage Co., The, Kalamazoo, Mich.	Lupton's Sons Co., David, Philadelphia, Pa.	Grock Bros. Mfg. Co., St. Louis, Mo.
Dampers—Quadrants—Accessories.	Heating Systems Corp., Joliet, Ill.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Miller & Doing, Inc., Brooklyn, N. Y.
Eller Mfg. Co., Canton, Ohio	Lakeside Co., Hermansville, Mich.	Heat Regulation Systems.	Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City
Howes Co., S. M., Boston, Mass.	A. H. Robinson Co., Massillon, Ohio	H. M. Sheer Co., Quincy, Ill.	Troy, N. Y.
Milwaukee Corrugating Co., Mil., Chgo., La Crosse, Kan. City	Warm Air Furnace Fan Co., Sterling, Ill.	Heaters—Cabinet.	Connors Paint Mfg. Co., Wm., Troy, N. Y.
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Damper Regulators.	Williamson Heater Co., Cincinnati, Ohio	Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.	Cleveland Castings Pattern Co., Cleveland, Ohio
H. M. Sheer Co., Quincy, Ill.	Furnace Regulators.	Waterman-Waterbury Co., Minneapolis, Minn.	Quincy Pattern Co., Quincy, Ill.
	H. M. Sheer Co., Quincy, Ill.	Heaters—Combination Hot Water.	Vedder Pattern Works, Troy, N. Y.
		Alamo Heater Co., Chicago, Ill.	(Continued on page 36)

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Patented
THIS favorite ventilator has been further improved to insure—

Now made
of
ARMCO IRON

Greater Durability
Quieter Operation
Greater Efficiency
Better Balance

The New Cone-top Suspension, new Bronze Guide Bushings, and Cross Braced Skirt are the new features. Let us tell you in detail all about this better ventilator.

Write for special circular and prices today

LEWISBURG, PA.

"American Seal"

FURNACE CEMENT

Roof Cement — Stove Putty Plumbers Putty

PAINTS and SPECIALTIES

WILLIAM CONNORS PAINT MFG. CO.

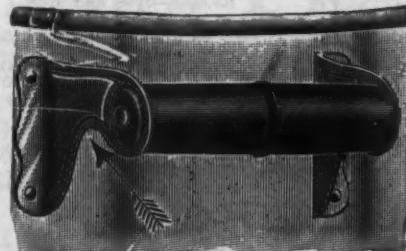
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Established 1852

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JAMES L. PERKINS
Western Distributor
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WE make a complete line of Boiler Handles. Also handles for Boiler Covers. Cut shows No. 40 style. Let us send you samples.

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229 to 237 ARCH STREET PHILADELPHIA, PA.
Warerooms and Factory: 100 to 114 Bread Street
Manufacturers of "Quaker City" line of Meters, Ends, Caps and Outlets

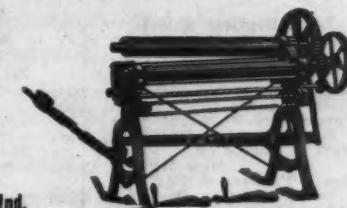
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50-INCH FORMING ROLL

This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and punches, all sizes, for hand or belt power.

Write for Catalog "R"
BERTSCH & CO., Cambridge City, Ind.



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IMMEDIATE SHIPMENT FROM STOCK

More than twenty kinds of Prime quality sheets are carried in stock. There is a special sheet for every purpose. Also Bars, Angles, Rivets, Bolts, Tools and Metal-Working Machinery. Write for Journal and Stock List.

JOSEPH T. RYERSON & SON INC.

Offices Milwaukee Jersey City Boston Detroit St. Louis Cincinnati Cleveland Buffalo

BUYERS' DIRECTORY

(Continued from page 34)

Perforated Metals.

Harrington & King Perforating Co., Chicago, Ill.

Pipe and Fittings—Furnace.

Chicago Furnace Supply Co., Chicago, Ill.

Eller Mfg. Co., Canton, Ohio

Henry Furnace & Fdy. Co., Cleyland, Ohio

Lamneck Co., W. E., Columbus, Ohio

Meyer & Bro. Co., F. Peoria, Ill.

Milwaukee Corrugating Co.

Mil., Ch'go, La Crosse, Kan. City

Mueller Furnace Co., L. J., Milwaukee, Wis.

Osborn Co., The J. M. & L. A., Cleveland, Ohio

Pipe and Fittings—Stove.

Meyer & Bro. Co., F. Peoria, Ill.

Milwaukee Corrugating Co.

Mil., Ch'go, La Crosse, Kan. City

Pipe—Conductor.

Barnes Metal Products Co., Chicago, Ill.

Berger Bros. Co., Philadelphia, Pa.

Dieckmann Co., Ferdinand, Cincinnati, Ohio

Eller Mfg. Co., Canton, Ohio

Lupton's Sons Co., David, Philadelphia, Pa.

Milwaukee Corrugating Co.,

Mil., Ch'go, La Crosse, Kan. City

New Jersey Zinc Sales Co., The New York, N. Y.

Presses.

La Salle Machine Works, Chicago, Ill.

Pipe Covering.

Saint Mountain Co., Chicago, Ill.

Punches.

Bertsch & Co., Cambridge City, Ind.

Interstate Machinery Co., Chicago, Ill.

La Salle Machine Works, Chicago, Ill.

Ryerson & Son., Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Punches—Combination Bench and Hand.

Hyro Mfg. Co., New York, N. Y.

Punches—Hand.

Hyro Mfg. Co., New York, N. Y.

Putty—Sieva.

Connors Paint Mfg. Co., Wm., Troy, N. Y.

Radiator Cabinets.

The Hart & Cooley Mfg. Co., New Britain, Conn.

Tuttle & Bailey Mfg. Co., Chicago, Ill.

Radiators—Shields.

Beh & Co., Inc., New York, N. Y.

Register Shields.

Beh & Co., Inc., New York, N. Y.

Registers—Warm Air.

Auer Register Co., Cleveland, Ohio

Eller Mfg. Co., Canton, Ohio

Forest City-Walworth Run Foundries Co., Cleveland, Ohio

Hart & Cooley Co., New Britain, Conn.

Henry Furnace & Fdy. Co., Cleveland, Ohio

Independent Register & Mfg. Co., Cleveland, Ohio

Ku-No Register Mfg. Co., St. Louis, Mo.

Lamneck & Co., W. E., Columbus, Ohio

Meyer & Bros. Co., F. Peoria, Ill.

Milwaukee Corrugating Co.,

Mil., Ch'go, La Crosse, Kan. City

Mueller Furnace Co., L. J., Milwaukee, Wis.

Rock Island Register Co., Rock Island, Ill.

Tuttle & Bailey Mfg. Co., Chicago, Ill.

Registers—Wood.

American Wood Register Co., Plymouth, Ind.

Auer Register Co., Cleveland, Ohio

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co.,

Mil., Ch'go, La Crosse, Kan. City

Regulators—Heat.

H. M. Sheer Co., Chicago, Ill.

Ridging.

Armeo Distributors Ass'n of America, Middletown, Ohio

Eller Mfg. Co., Canton, Ohio

Lupton's Sons Co., David, Philadelphia, Pa.

Milwaukee Corrugating Co.,

Mil., Ch'go, La Crosse, Kan. City

Rivets—Steve.

The Kirk-Latty Co., Cleveland, Ohio

Lamson & Sessions Co., Cleveland, Ohio

Ryerson & Son, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Rods—Steve.

The Kirk-Latty Co., Cleveland, Ohio

Lamson & Sessions Co., Cleveland, Ohio

Rolls—Forming.

Bertsch & Co., Cambridge City, Ind.

Roofing Cement.

Connors Paint Mfg. Co., Wm., Troy, N. Y.

Roof—Flashing.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Milwaukee, Wis.

Roofing—Iron and Steel.

Armeo Distributors Ass'n of America, Middletown, Ohio

Central Alloy Steel Corp., Massillon, Ohio

Eller Mfg. Co., Canton, Ohio

Inland Steel Co., Chicago, Ill.

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Osborn Co., The J. M. & L. A., Cleveland, Ohio

Ryerson & Sons, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Roofing—Tin.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co.,

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Roofing—Zinc.

New Jersey Zinc Sales Co., The, New York, N. Y.

Rubbish Burners.

Hart & Cooley Co., New Britain, Conn.

Schools—Sheet Metal Pattern Drafting.

St. Louis Technical Institute, St. Louis, Mo.

Schools—Warm Air Heating.

St. Louis Technical Institute, St. Louis, Mo.

Screws—Hardened Metallic Drive.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co.,

Mil., Ch'go, La Crosse, Kan. City

Parker-Kalon Corp., 300 Varick St., New York

Screws—Hardened Self-Tapping, Sheet Metal.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co.,

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Parker-Kalon Corp., 300 Varick St., New York

Screws—Hardened Self-Tapping, Sheet Metal.

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Kester Solder Co., Chicago, Ill.

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Parker-Kalon Corp., 300 Varick St., New York

Soldering Furnaces.

Burgess Soldering Furnace Co., Columbus, Ohio

Diener Mfg. Co., G. W., Chicago, Ill.

Ryerson & Son, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Soldering Supplies, Kester Solder Co., Chicago, Ill.

Standard Ventilator Co., Lewisburg, Pa.

Silps.

Peck, Stow & Wilcox Co., Southington, Conn.

Ryerson & Son, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Sifters—Ash.

Diener Mfg. Co., G. W., Chicago, Ill.

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Eller Mfg. Co., Canton, Ohio

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Peck, Stow & Wilcox Co., Southington, Conn.

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WANTS AND SALES

Yearly subscribers to the AMERICAN ARTISAN may insert advertisements of not more than fifty words in our Want and Sales Columns WITHOUT CHARGE for three insertions.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired and must reach our office by Thursday of the week of publication. This privilege is not extended to manufacturers or jobbers—or those making a business of buying and selling used machines—employment agencies and brokers.

When sending advertisement state whether your name or blind number is to be used.

BUSINESS CHANCES

Lightning Rods—Dealers who are selling Lightning Protection will make money by writing to us for our latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable and Fixtures are endorsed by the National Board of Fire Underwriters and hundreds of dealers. Write today for samples and prices. L. K. Diddie Company, Marshfield, Wis.

AMERICAN ARTISAN

BUSINESS CHANCES

For Sale—General sheet metal, furnace and factory work, located on the west side of Cleveland, Ohio. A good mechanic and live wire will make good. Established 21 years. Fully equipped, ideal location. Will sell at a bargain and help buyer get started. Wish to retire on account of age and health. Address J509, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

Wanted—An active working partner in a thriving furnace and sheet metal business. I have been in the sheet metal business for about 20 years. Business is rushing so at the present time that I must have a sober, honest, industrious working partner. Experience is unnecessary. Must furnish references. Address T-509, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

FOR SALE—A general sheet metal and furnace business, well established, with all necessary tools and machinery. Located on good business street in Milwaukee, Wisconsin. Can be bought right. Building and living quarters can also be bought or rented. Address Z-509, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

For Sale—Well equipped and paying sheet metal shop. Only one in business district. Fine location for radiator business. 23 years on same street. Fine proposition. Must change climate. Write or see J. T. Hogan, 103 N. Sheridan Road, Waukegan, Ill. H509

FOR SALE—Sheet metal, furnace and roofing business located on west side of Chicago. Great chance for mechanic. Fully equipped, ideal location. Address A-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

HELP WANTED

Wanted—Tinner and furnace man under 50 years. Steady year round job. Address Hinckley Hardware Co., Hinckley, Ill. L509

HELP WANTED

Wanted—A thorough sheet metal workman, not over 40 years, for any and all kinds of sheet metal work. Only expert mechanics need apply. \$9 hours per day. \$40.00 per week. Address Harry T. Klugel, North Emporia, Va. K509

Wanted at Once—An all around man to do class of work that comes in a country tin shop. Must be able to do some plumbing and drive a car. Want a sober man and one who will be on the job. Wages \$30.00 year around. Address O. L. Doward, Mt. Morris, Ill. S-509

Wanted—First class sheet metal worker who can take charge of shop and do any kind of work that comes to a shop in a city of 50,000. Must be sober and a fast worker and able to give reference. Union shop. Address Box 126, Anderson, Ind. F-509

Wanted—All around tinner for inside and outside work. Open shop on Chicago's South Side. Address L. Crawford, 724 West 83rd St., Chicago, Ill. R-509

Wanted—An experienced metal pattern maker for coal, gas and furnace pattern work. Apply Enamel & Heating Products, Ltd., Sackville, N. B., Canada. X509

SITUATION WANTED

Position Wanted—By practical and skilled man of 37 years of age, as manager or superintendent. Have had 18 years' experience in the roofing and sheet metal business. Can handle the largest kind of work and obtain results. South preferred but can go anywhere. Address W-509, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

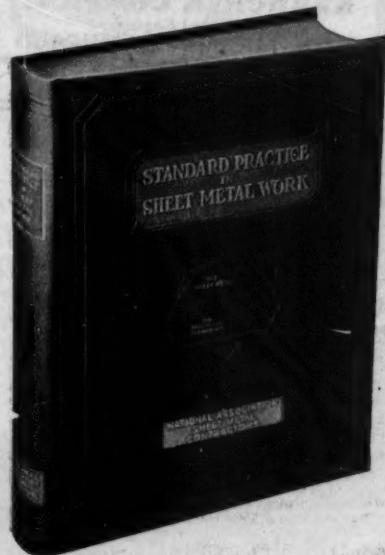
SITUATION WANTED by all around sheet metal worker with 25 years at the trade. Can read blue prints and a good lay out man. Can handle any job that may come to any job shop. Employed, but wish to make a change. Address Metal Worker, 1353 Oakland St., Shreveport, La. B-510

STANDARD PRACTICE in SHEET METAL WORK

THE first and only book that is an authority on Standard Practice and to which you and the architect can refer for reliable data. Prepared by the ablest men in the industry. Contains 12 sections covering every branch of the trade. Printed on good paper—durably bound, attractively stamped.

When you get your copy you will see that it will pay you to present a copy to every architect with whom you do business. The most remarkable book ever published for the benefit of the Sheet Metal Business.

768 pages—9x12 in., 494 pages of illustrations—274 pages of text.
PRICE \$10.00 postpaid.



AMERICAN ARTISAN is cooperating with the National Association to secure the widest possible distribution of this book. The handling of orders is being done without cost to the association.

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IN ORDER THAT YOU MAY OBTAIN YOUR COPY SOON
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139 North Clark Street, Chicago, Illinois

ENCLOSED find \$10 (ten dollars) for one copy of STANDARD PRACTICE IN SHEET METAL WORK.

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For Sale—\$32.00—Ellison's inclined draft gauge. First check for \$16 takes it. M. E. Tice, care Williams Oil-O-Matic, Bloomington, Ill. Y509

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FOR SALE—P. S. & W. large burring machine with stand, Beading machine, No. 4-8" throat, one open case turning machine, equipped with elbow tools with stand, two Claten Lamberty fire pots, No. 72, one No. 949 double seaming stake without heads, two gutter end irons. All in O. K. condition. First \$40.00 ck. takes them. Address L. T. Peterson, Denison, Iowa. D-510

For Sale—Used Machinery—1-3 ft. square shear, 1-8 ft. sq. shear, 1-10 ft. Power Sq. shear, 1-4 ft. Brake, 1-40 ft. draw bench, 1 electric Welding Machine, 1 Rotary Power Riveting Machine. Address Ellinwood Company, 725 Third Ave., Brooklyn, New York. M-509

FOR SALE—One 22" ft. sq. shearing machine, one small burring, one lever punch, one grooving machine, one 36" stock shear, one setting down machine, one stock and die and other tinner's tools. Address Mrs. A. Haller, Hortonville, Wis. E-510

TINNERS ATTENTION—FOR SALE—Complete outfit of tinner's tools. Robinson brake, all hand tools included. For cash or what have you. Address C-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

Tinners' Tools for Sale—1 Pexto wiring machine with stand, 1 30" bar folding machine, 1 large turning machine with stand. All as good as new. Address Mrs. A. Haller, Hortonville, Wis. G509

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New Mighty Midget Unishears

\$56.00

4 Foot Chicago Steel Brake	-	\$80.00
30 Inch Bar Folder	- - -	\$35.00
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porcelain). Order an 8-lb.
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The Sensational New Burner, Built on
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Dealers Wanted—Write for Terms
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with excellent, up-to-date engineering and sales experience, highly familiar with best trade in New York and Pennsylvania, will consider other territory. Wish to connect with prominent manufacturer. Available on short notice. Address Karl Kokborg, 738 Glenwood Ave., Buffalo, N. Y. C509

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Two used squaring shears 6 ft. to 10 ft. long for 3/16" or 1/4" metal. Give complete information—make, time in use, state of repair, price, etc. Address O509 American Artisan, 139 N. Clark Street, Chicago, Ill.

SPECIAL NOTICE

SALES MANAGER WANTED

We have a permanent place for an experienced Furnace Sales Manager in our organization. He should have had both traveling sales and office sales experience and must be under forty years of age.

A traveling salesman who can show an exceptional sales record and who has the educational background to enable him to handle sales correspondence would be considered if he could show executive ability as well.

Stock ownership would be possible after complete satisfaction had been rendered. Address The Lenox Furnace Company, Marshalltown, Iowa.

F510

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It Pulls Business Your Way!

KERNCHEN SIPHONAGE VENTILATOR



SUPPLY your next job with "I-S-V" and you never will have a complaint. Complete stock on hand for prompt shipment.

Write today for complete data and prices. Made only by

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Ventilating Engineers
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Are you riding a Snail to Market—Success? If so, please consider the Aeroplane—it's pick-up, speed, direct line, quickest to get there, public interest, honor, fame and glory. Moral:—Adopt the methods of an aeroplane, and let them carry you to Success.

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Making money is mainly a question of using your head. The Modern Method is to Concentrate on a Systematic Course of Training, like ours, to enlarge Vision, Plan Reading, Designing, Working Ability, etc. Aeroplane-minded men know it is far cheaper and easier to learn from an organized Course, like the St. Louis Technical Institute's, than to ride a snail for 10 to 30 years in the hope of getting somewhere—but always getting disappointed.

DOES \$75 TO \$100 PER WEEK INTEREST YOU?

Of course it does, and it would amaze you to know there are more such opportunities available today than ever before. To men of Technical Training—they are open. Every now and then a Student writes us the glad news that he has connected up with such a position, and it makes our heart happy, too. Technical Training allows Students to maintain steady work, which pays for their Course several times over every year—all the rest is clear profit. Yes, there is a real demand for Technical Trained Men.

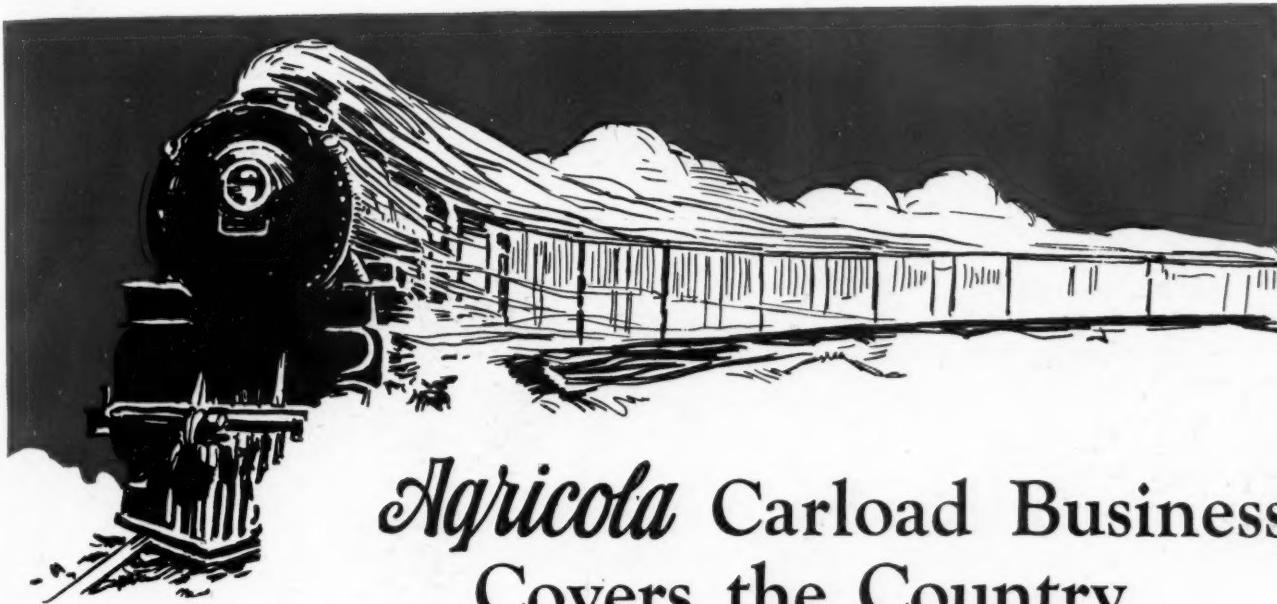
WHY NOT ENGAGE OUR SERVICES TO HELP YOU ADVANCE?

For 10 years we have satisfied in a most gratifying way, a considerable army of men who were the hardest to please—most discriminating, doubting kind of tradesmen. We have proven to them absolutely that we could help them Win a larger measure of Success in life than they could ever have accomplished alone. Surely, then, we can also help you—who are reading this.

Yes, Sir! we train you in your own Home, Personal, Clear, Direct. Check your course—write today, before you forget it. Full information free.

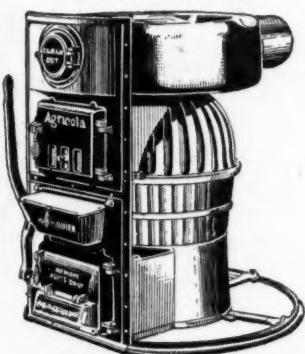
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"Balmy Warmth
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Sunny South"



The New AGRICOLA is equipped with one-piece radiator, outside waist-high shaker handle, built-in smoke consumer and many other advantages found only in the highest priced heating systems.

Full steam ahead! The AGRICOLA Plan of Carload selling has spread rapidly throughout the nation. Heating men in every section have been able to broaden territories and increase their profits because of Agricola's ability to manufacture and sell quality furnaces at competitive prices.

No matter where you are located, the Agricola Plan is worthy of your careful consideration. Let us tell you more about the Agricola! A letter from you will bring this information. No obligation.

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FURNACES

Profitable Winter Business . . . erecting ELLER Metal Ceilings and Walls



*A complete line
of Metal Walls
and Ceilings in
appropriate designs*

COLD weather need not stop your profits. There is plenty of "inside" work, installing *Eller* Metal Ceilings and Walls. Churches, schools, stores, and other public buildings all present opportunities for this profitable winter business.

Take your *Eller* Catalog with its hundreds of attractive designs and go after metal ceiling and wall jobs. The *Eller* Dealer Service will figure your estimates for you. Send in sketches and dimensions. We will tell you exactly what material you need and how much it will cost.

Eller perfect-fit Metal Walls and Ceilings are the finest and most complete available. They have large, full and uniform beads which nest closely and give tight-fitting joints that are straight, true and dust proof, that assures neat, accurate work. Write for an *Eller* Catalog if you have'nt one . . . and on your next job, send to the Dealers Service for a materials list and complete costs.

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